

# DENON

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# 22012

Digital Player

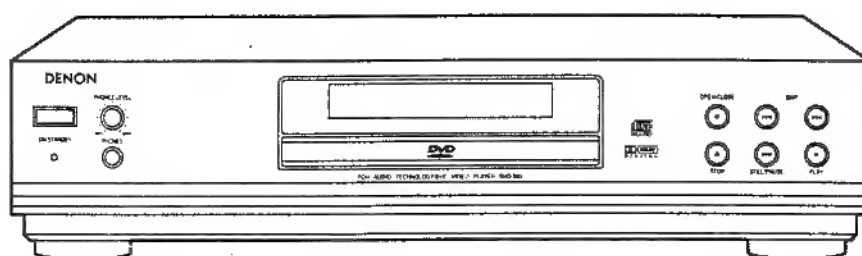


V28835

## SERVICE MANUAL

# MODEL DVD-3000

## DVD VIDEO PLAYER



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• Some illustration using in this service manual is slightly different from the actual set.

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## SAFETY PRECAUTIONS GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1M\Omega$  and  $5.2M\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

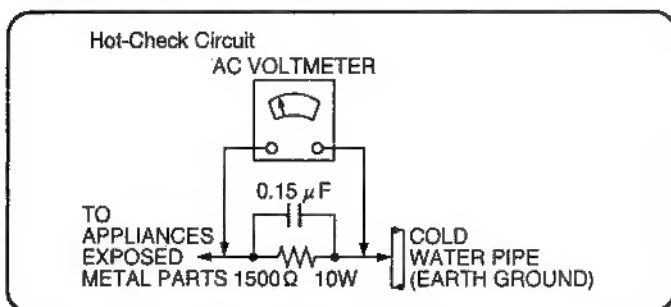


Figure 1

### LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5k\Omega$ , 10 watts resistor, in parallel with a  $0.15\mu F$  capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety.

These parts are marked by  $\Delta$  in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

## PRECAUTION OF LASER DIODE

### CAUTION:

This unit utilizes a class I laser. Invisible laser radiation is emitted from the optical pickup lens when the unit is turned on:

1. Do not look directly into the pickup lens.
2. Do not use optical instruments to look at the pickup lens.
3. Do not adjust the preset variable resistor on the optical pickup.
4. Do not disassemble the optical pickup unit.
5. If the optical pickup is replaced, use the manufactures specified replacement pickup only.
6. Use of control or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

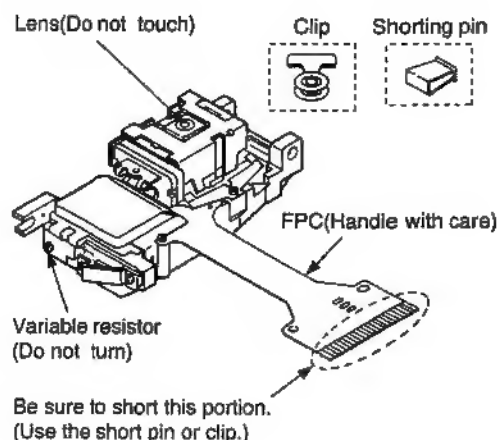
## HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.

So be careful of electrostatic break down during repair of the optical pickup.

### Handling of optical pickup

1. Do not subject the optical pickup to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FPC Board).  
When removing or connecting the short pin, finish the job in as short times as possible.
3. Be careful not to apply excessive stress to the flexible board (FPC Board)
4. Do not turn the variable resistor (Laser power adjustment). It has already been adjusted.

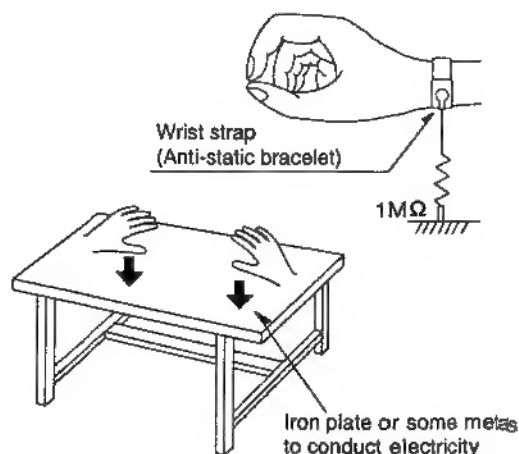


### Grounding for electrostatic breakdown prevention

1. Human body grounding  
Use the antistatic wrist strap to discharge the static electricity from your body.
2. Work table grounding  
Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.

### Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pickup.



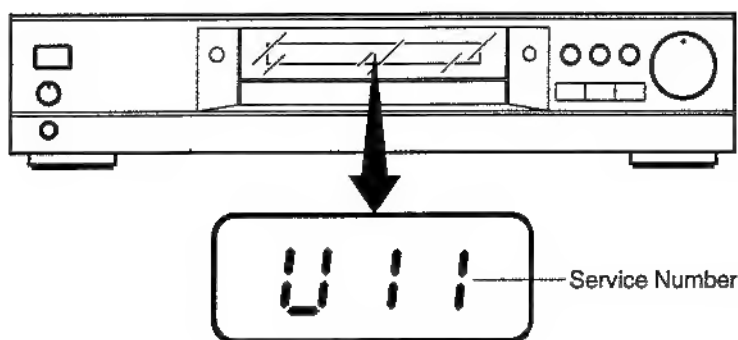
## Self-Diagnosis Function for Service Number Display

This unit has a self-diagnosis function which detects a problem or malfunction within the unit and displays its corresponding service number on the display of the unit.

The Service Information Display Mode is used by the technician to help determine the source of a malfunction.

To operate the Service Information Display Mode during servicing, press the [0] (remote control unit) button while pressing the OPEN/CLOSE and STILL/PAUSE buttons simultaneously.

Please refer to the table shown below when a service number has appeared.



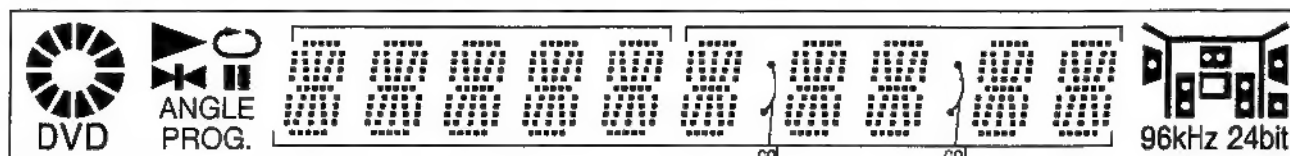
| Mode                        | Service Number | Player State           | Check Point  |
|-----------------------------|----------------|------------------------|--|
| During Operation            | U11            | FOCUS TROUBLE          | IC2001, IC2511, IC5201, Pick-up                        |
|                             | H01            | TRAY LOADING TROUBLE   | IC2001, IC2511, Loading motor                          |
|                             | H02            | SPINDLE SERVO TROUBLE  | Disc motor, IC2501, IC2001                             |
|                             | H03            | TRAVERSE TROUBLE       | Traverse motor, IC2511, IC2001                         |
|                             | H04            | TRACKING SERVO TROUBLE | IC2001, IC2501, IC5201, Pick-up Disc                   |
|                             | H05            | SEEK TROUBLE           | Traverse motor, IC2511, IC2001                         |
| Service Information Display | F0**           | DISC FORMAT ERROR      | Disc   |
|                             | F1**           | DISC CODE ERROR        | Disc   |
|                             | F2**           | DECODER LSI ERROR      | IC3001, IC3201   |
|                             | F3**           | SDRAM ERROR            | IC3051, IC6301, IC7051                                 |
|                             | F4**           | IIC BUS ERROR          | IC2001, IC3201, IC4201, IC5201, IC6201, IC6312, IC7001 |
|                             | F5**           | DSC ERROR              | IC2001   |
|                             | F6**           | ECC ERROR              | IC7001   |
|                             | F7**           | MICRO PROCESSOR ERROR  | IC6001, IC6201   |
|                             | F8**           | MICRO PROCESSOR ERROR  | IC6001, IC6201   |

## SERVICE INFORMATION

### 1. Lighting Confirmation Function of Display Tube

#### SETTING PROCEDURES

During pressing both [STILL/PAUSE] and [OPEN/CLOSE] buttons on the DVD Player, push [9] key of the Remote Controller and then all of the display lights, and the [POWER] button is pressed to release.



### 2. Initialization of the DVD Player

Make initialization of the DVD Player when replacing the Main p.w. board, Operation p.w. board and etc.

#### INITIALIZATION PROCEDURES

During pressing both [STILL/PAUSE] and [SKIP/SEARCH ◀▶] buttons simultaneously on the DVD Player, push [POWER] button on the DVD Player so that the unit is initialized (Factory shipping condition).

The letter of [INITIALIZED] is displayed on the screen.

#### [CAUTION]

When the initialization has been made, the contents of user initial setting is lost.

Therefore, before making initialization, previously memorize the contents of user initial setting and set the initial setting again after initialization.

### 3. After Repair (Transport Method in Repair Service)

After repair, settle the traverse unit at elevation up position.

#### SETTLING PROCEDURES

1. Turn the power on.
2. Press the [OPEN/CLOSE] button to close the tray.
3. Turn the power off.
4. Disconnect the power plug from the power outlet.

#### [CAUTION]

Do not close the tray manually after disconnect the power plug from the power outlet in tray open condition.

In this case, the traverse is not settled at elevation up position (stand-by) so that you can't transport the unit.

### 4. In Case of Stopping Operation During Playback

When the unit stop during playback (no operation button operates, etc.), press the [POWER] button. After 5 seconds later the power will be turned off.

When the power is turned on again and the same state appears, the unit may be in trouble. Or, in case stopping operation when the specific disc is used, the cause of trouble may be in the disc itself.

### 5. Operation Lock Function in Salse Demonstration

This function is used to prevent the disc from loss in the salse demonstration.

When this function is set, It is not able to eject the disc and turn the power off.

#### SETTING PROCEDURES

During pressing the [STOP] button of the DVD Player, push the [POWER] button of the Remote Controller to make the Lock function operate.

Disconnect the power plug from the power outlet to reset this function.

### 6. Lens Cleaning

For cleaning, wipe the Pick-up softly with the new cotton cloth damped with ethyl alcohol.

Never wipe it strongly or the wrong influence will have on the glass coating of the Pick-up.

After cleaning, be sure to check no dirt or dust on the lens surface.

## SECTION 1 ADJUSTMENT PROCEDURES

### How to Remove the Disc on the Tray in Trouble

When the Disc does not eject even after pushing the OPEN/CLOSE button, remove the Disc as follows.

1. Remove the 7 screws, and remove the Top Cover  
While spreading the left and right sides slightly, remove the top cover while lifting the rear portion.

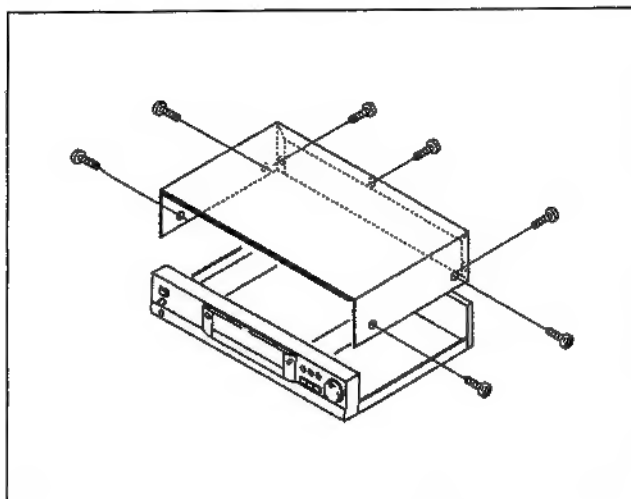


Fig. A Removal of the Top Cover

2. Remove the clamp support plate by removing the 4 screws.

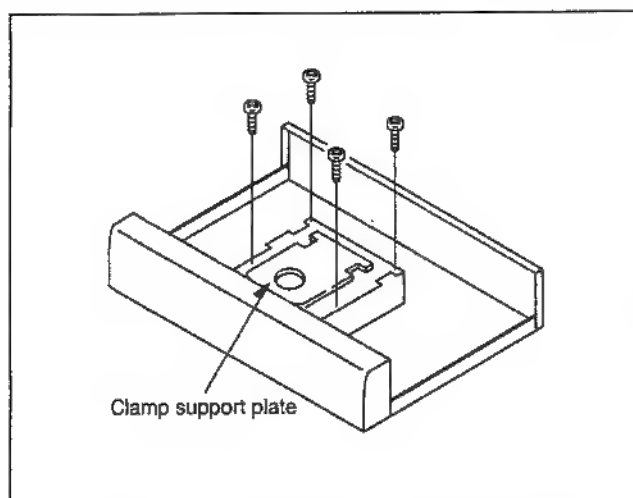


Fig. B Removal of the Clamp Support Plate

3. Remove the disc, taking care not to damage it.

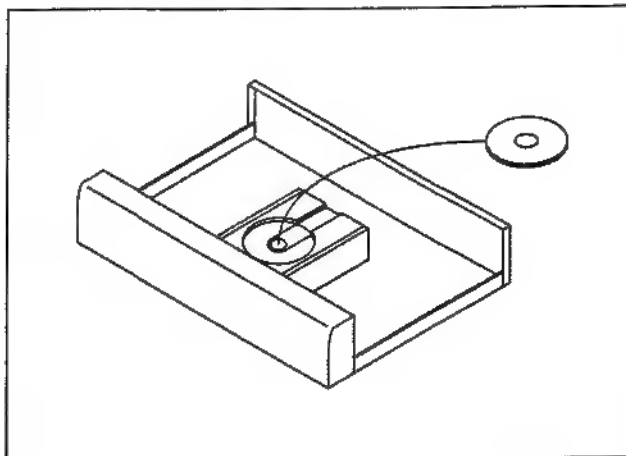


Fig. C Removal of the Disc

# Disassembly, Reassembly, Replacement and Adjustment Procedures

## 1. Disassembling and Reassembling the Casing Parts

### 1-1. Removing the Top Cover

1. Remove the 7 screws, and remove the Top Cover. While spreading the left and right sides slightly, remove the top cover while lifting the rear portion.

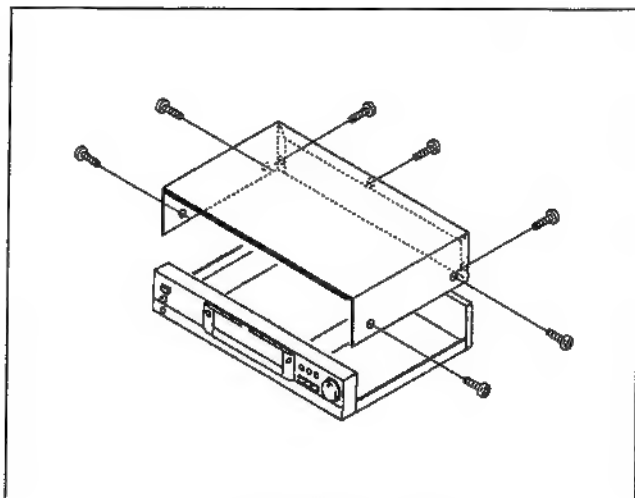


Fig. 1-1-1 Removal of the Top Cover

3. Press the Open/Close button and close the tray, then unplug the power cord.
4. Remove the flexible cables which connect the printed circuit board on the front panel with the main unit. Then remove the 2 screws on the bracket of the front panel.

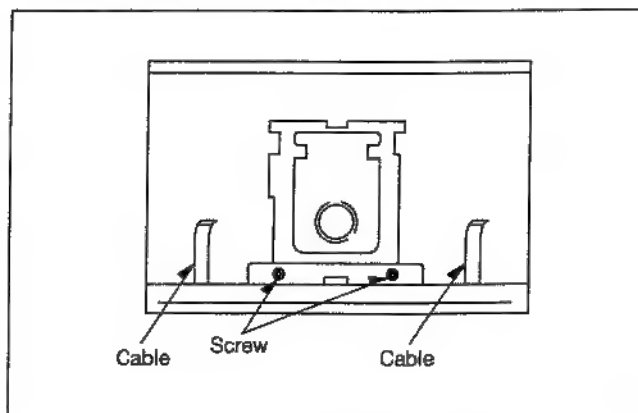
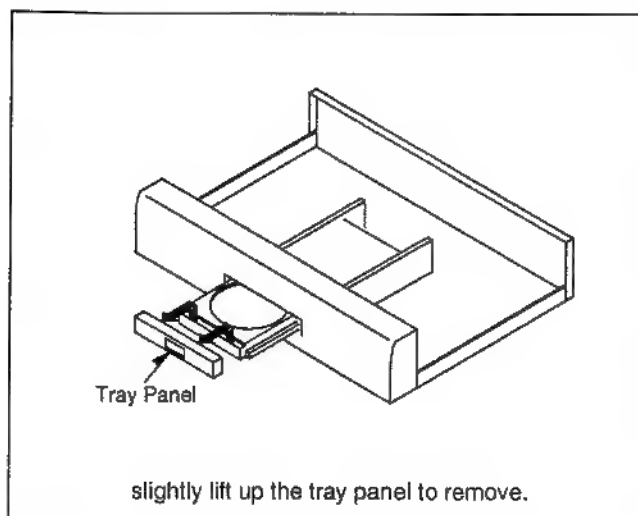


Fig. 1-2-2 Removal of the Front Panel

### 1-2. Removing the Front Panel

If the tray can be opened electrically.

1. Perform this operation after the top cover has already been removed.
2. Press the Open/Close button and open the tray. If there is a disc in the tray, remove the disc, taking care not to damage it. Then remove the tray panel attached to the front edge of the tray.



slightly lift up the tray panel to remove.

Fig. 1-2-1 Removal of the Tray Panel

5. Unlock the 3 tabs on the bottom of the front panel, the 2 tabs on both the left and right and the 2 tabs on the traverse Unit, and remove the front panel.

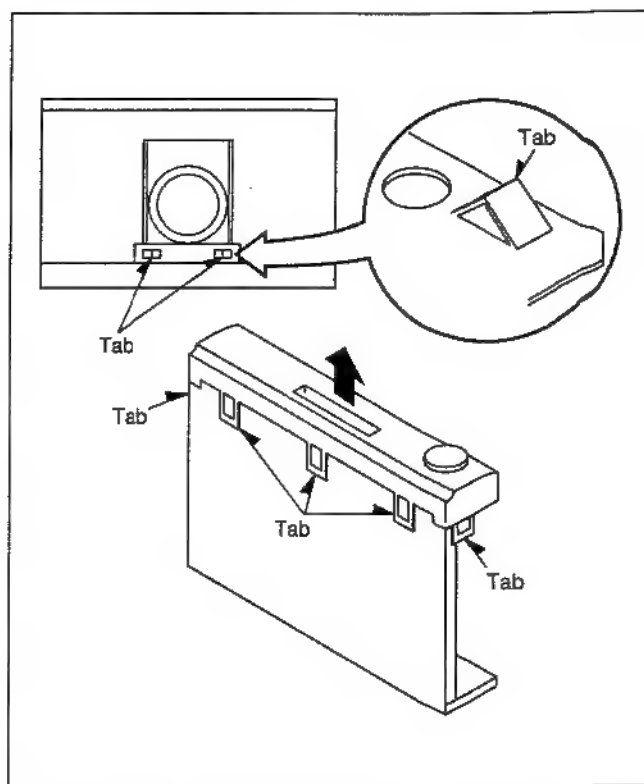


Fig. 1-2-3 Location of Tabs on the Front Panel

If the tray cannot be opened electrically (if the disc does not eject even after pushing the Open/Close button).

1. Perform this procedure after the top cover has already been removed as shown in Fig. A.
2. Remove the 4 screws on the Clamp Support Plate as shown in Fig. B.
3. If there is a disc in the tray, remove the disc, taking care not to damage it as shown in Fig. C.  
Refer to "How to Remove the Disc on the Tray in Trouble" with respect to the above procedures.
4. You will see a portion of the rotary cam from the mechanism moving hole at the bottom of the unit. Use a pair of tweezers to move this section to the "Tray Open" position.

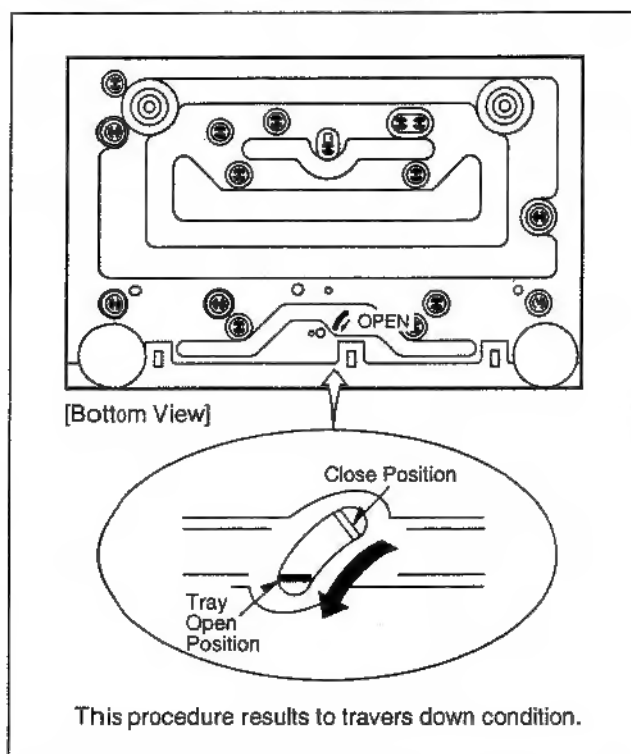


Fig. 1-2-4 Tray Open Position

5. The tray can be moved by hand to the open position.

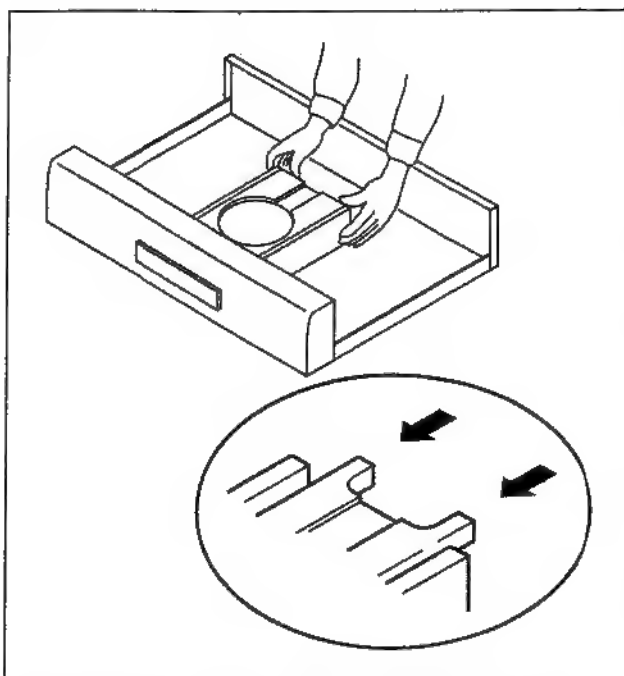


Fig. 1-2-5 Manual Movement of the Tray

6. Remove the tray panel attached to the front edge of the tray as shown in Fig. 1-2-1.  
Then, load the tray manually and remove the front panel as shown in Fig. 1-2-2 and Fig. 1-2-3.

### 1-3. Reassembling the Casing Parts

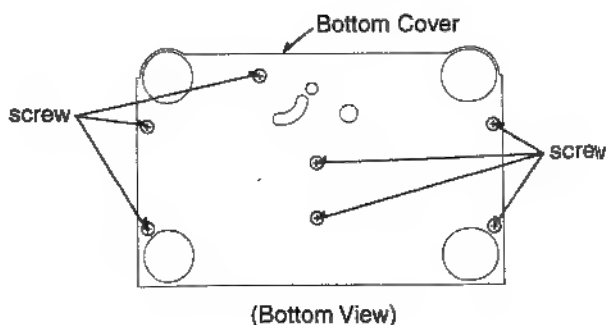
1. Assemble in the reverse order used in the disassembly.  
**Please obey the following:**

After repair is completed, use the following procedure to settle the Traverse Unit.

1. Push the power button and turn off the power.  
Verify that the stand-by lamp is on.
2. Unplug the power cord.
3. After the stand-by lamp has been on, the power cord is unplugged to settle the traverse Unit automatically.

### 1-4. Removing the Bottom Cover

Remove the 7 screws, and remove the Bottom Cover.





## 2. Disassembling and Reassembling the Loading Base

Please take proper care to prevent static electricity damage when touching the loading base. We recommend that you remove the entire loading base Unit before replacing the laser pick-up.

### 2-1. Removal of the Loading Base

1. Follow the "Top Cover," "Tray Panel" and "Front Panel" when removing the casing parts.

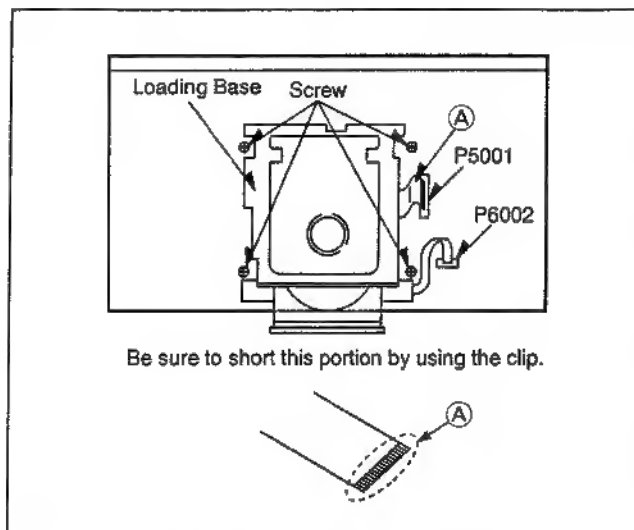


Fig. 2-1 Removal of the Loading Base

2. Remove the 2 Flexible Cables connecting the loading base and the main P.W.B. (Circuit Board Assembly). Static electricity destroys the laser diode. After removing the flexible cable (A), short the flexible cable (A) with a metal clip.
3. Remove the 4 screws attaching the Loading Base.

### 2-2. Disassembling the Clamp Support Plate and the Clamper

1. Remove the Clamp Support Plate from the Loading Base by removing the 4 screws.

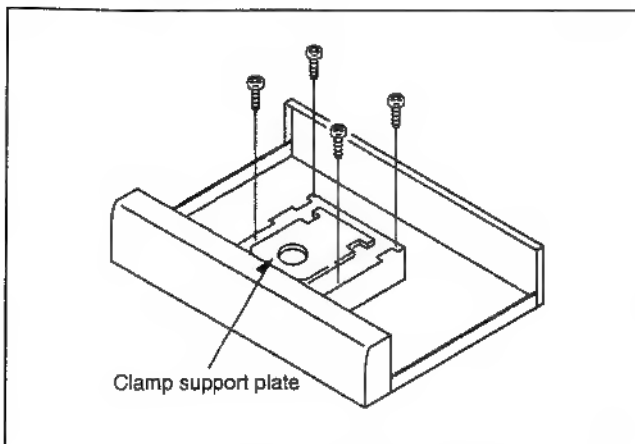


Fig. 2-2-1. Removal of the Clamp Support Plate

2. Remove the 4 screws.
3. Disassemble while unlocking the three tabs on the bottom of the clamper. Be careful not to damage these tabs.

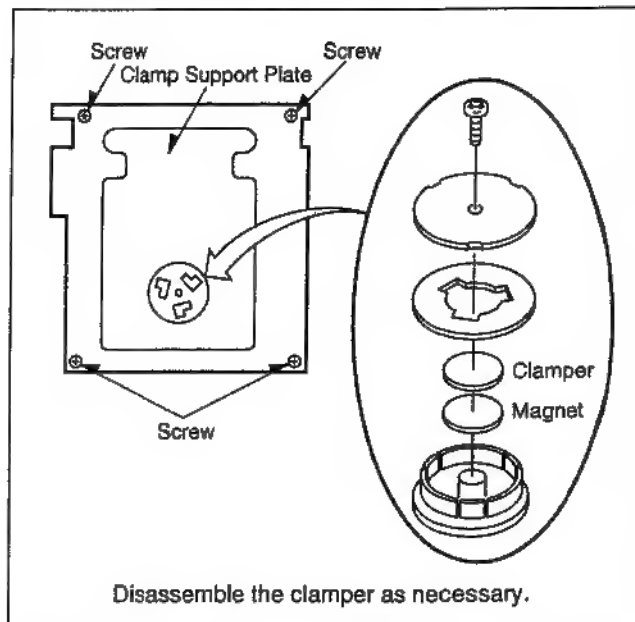


Fig. 2-2-2 Disassembly of the Clamper

### 2-3. Removing the Loading Tray

1. Move the portion of the Rotary Cam extending from the bottom of the loading base to the "Tray Open" position.

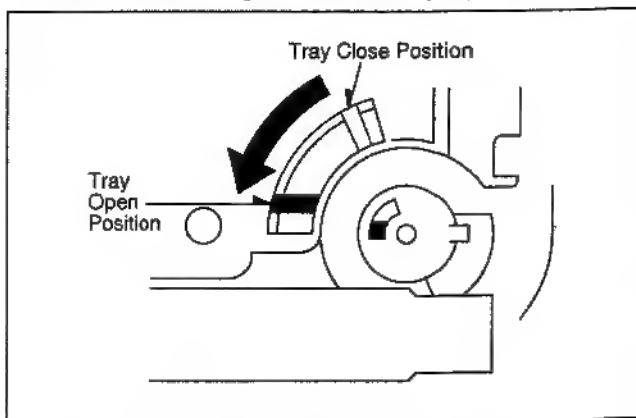


Fig. 2-3-1 Tray Open Position of the Rotary Cam

2. The tray can be manually moved to the open position.

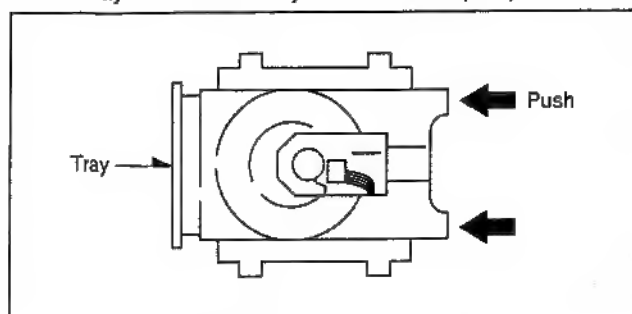


Fig. 2-3-2 Manual Movement of the Tray

3. The left and right catchers are locked so that the tray will not slip out. Therefore remove the tray while spreading these catchers outward.

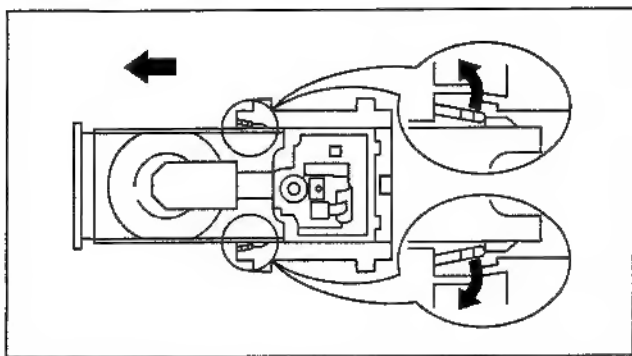


Fig. 2-3-3 Removal of the Tray

## 2-4. Removing the Traverse Unit

1. Remove the 2 screws setting the Rotary Support Plate Spring. Then remove the 2 screws fixing the Chassis Stoppers and the Springs (two each).

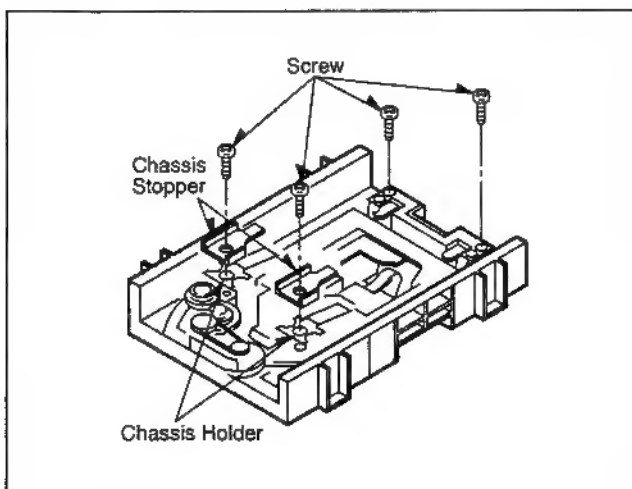


Fig. 2-4-1 Removal of the Traverse Unit

2. The Traverse Unit is connected to the Rotary Cam, slowly lift the back side (the side of Rotary Support Plate Springs) and remove.

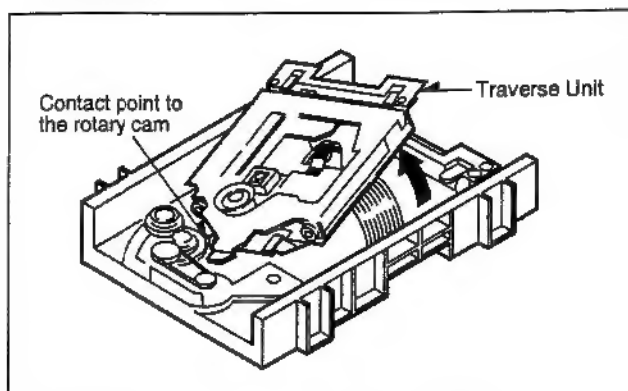


Fig. 2-4-2 Contact Point of the Traverse Unit and the Rotary Cam

## 2-5. Removing the Loading Section Parts

These parts can be removed even without taking out the Traverse Unit. Each gear and belt can be removed as shown in the figure below.

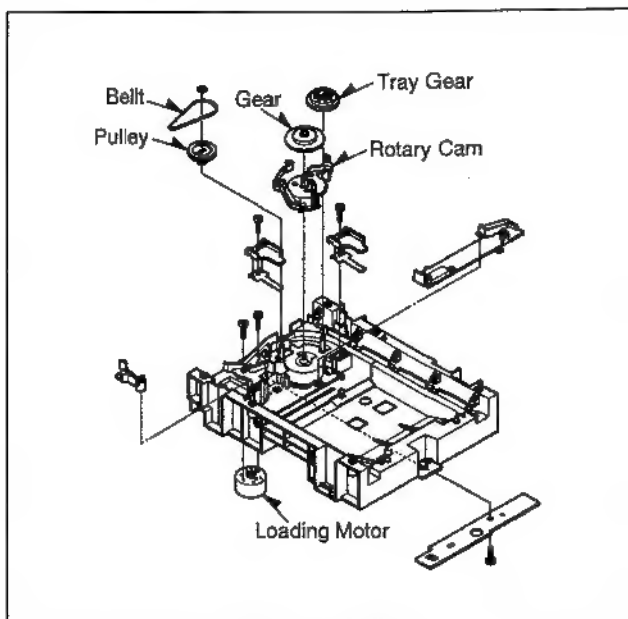


Fig. 2-5 Removal of the Loading Mechanism

## 2-6. Assembling the Loading Section Parts

Although the phases do not need to be aligned during assembly, please follow the order for assembly.

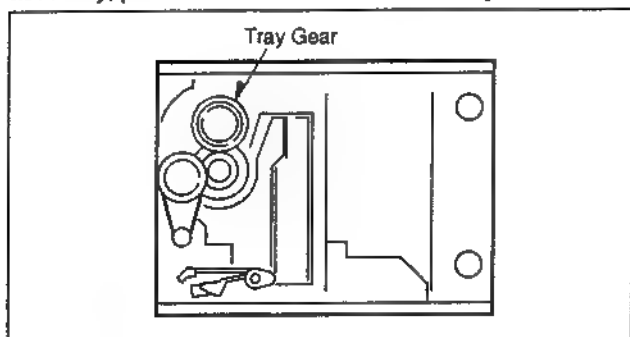


Fig. 2-6 Assembly of the Loading Mechanism

## 2-7. Assembling the Traverse Unit

1. Pull the Flexible Cable, which sticks out from the Traverse Unit, out from the inner side of the Loading Base.

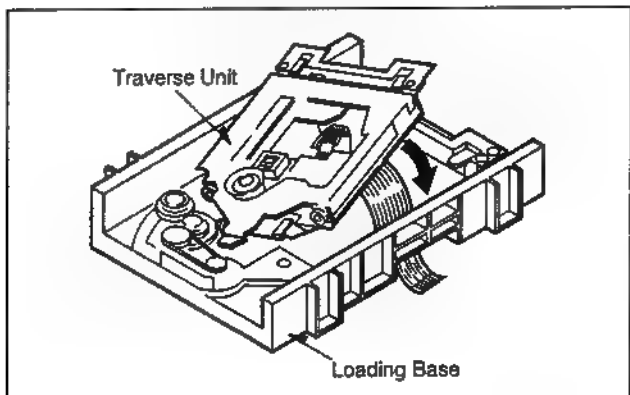


Fig. 2-7-1 Assembly of the Traverse Unit

2. Rotate the Tray Gear counterclockwise, then insert the end of the Traverse Unit into the groove in the Rotary Cam, and tighten the 4 screws.

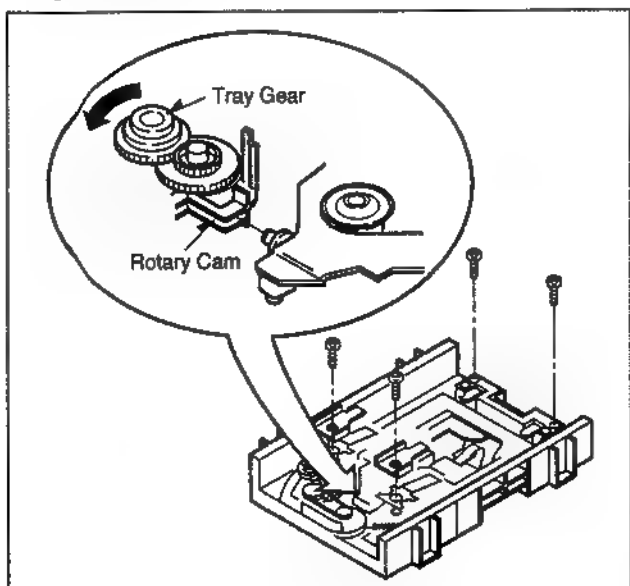


Fig. 2-7-2 Setting of the Traverse Unit and the Rotary Cam

## 2-8. Attaching the Loading Tray

1. Rotate the Tray Gear counterclockwise and verify that the Traverse Unit is at the lowest position.
2. Push the portion (A) of Rotary Cam in the direction of arrow.
3. Confirm that the Pawl of Rotary Cam is locked.

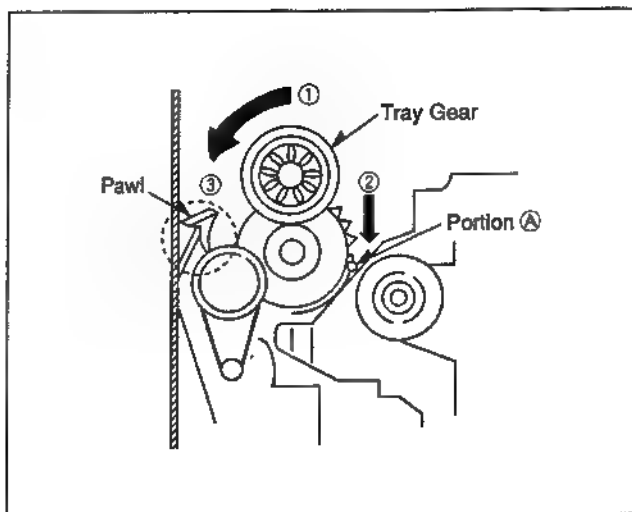


Fig. 2-8-1 Setting of the Tray

2. There is no phase alignment when inserting the tray. Insert the tray straight into the Loading Base.

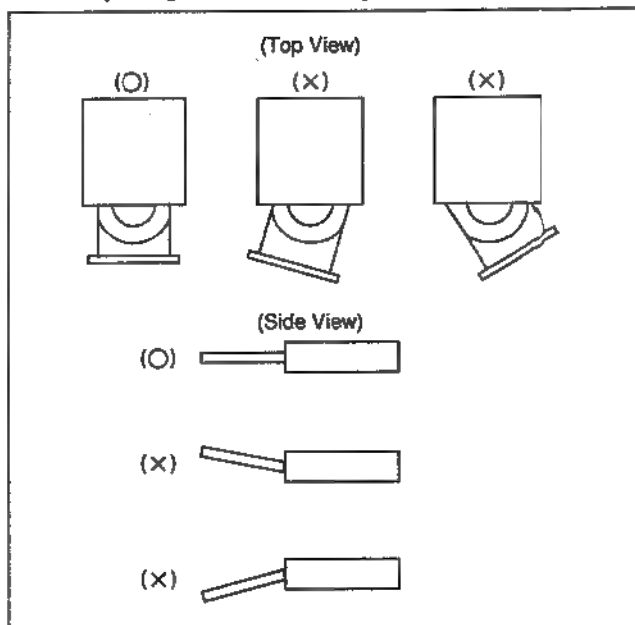


Fig. 2-8-2 Normal Setting of the Tray

## 2-9. Attaching the Clamp Support Plate

1. Attach the Clamp Support Plate and assemble the Loading Base.

### 3. Replacing the Main Parts of the Traverse Unit

This section describes the replacement of the main parts in the Traverse Unit, including the Laser Pick-Up, the Disc Motor, the Traverse Motor Unit.

Work should be performed after removing the Traverse Unit.

#### To Prevent Damage to the Laser Diode

Static electricity destroys the Laser Diode. Always take countermeasures to prevent static electricity damage when performing repairs around the Laser Pick-Up.

1. Do not touch the area around the Laser Pick-Up or the Actuator.
2. Do not check the Laser Diode with a tester or other device (the Laser Diode can be broken quite easily).
3. Short-Circuit the Laser Pick-Up  
Solder the Land in the center of the flexible cable of the Laser Pick-Up. This will short-circuit the Laser Diode and help prevent damage from static electricity.

#### Caution:

Do not forget to remove the soldered Laser Diode short-circuit after finishing repair, and leave the circuit open.

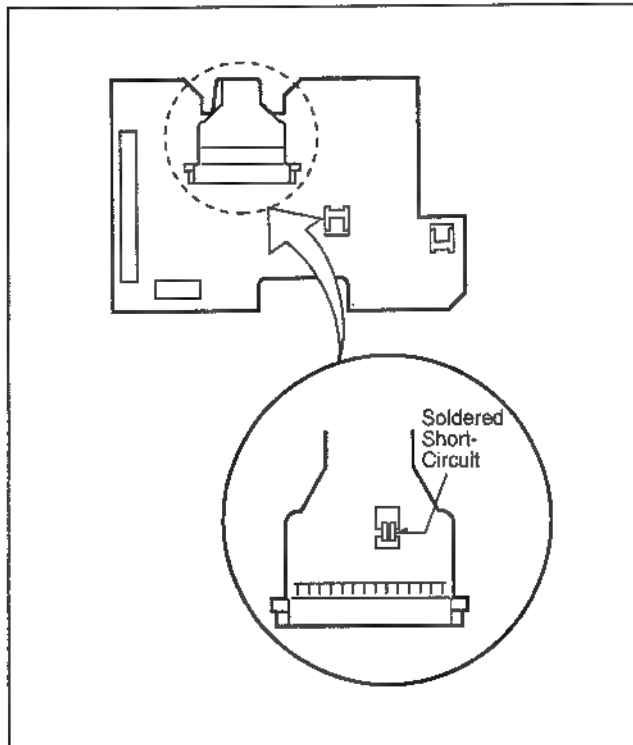


Fig. 3-A Short Circuit of the Laser Diode

#### Preparation Prior to Replacing the Parts

Always perform this work after taking action to prevent damage to the Laser Diode, regardless of whether or not the Laser Pick-Up is in working order.

1. Remove 2 connectors and 3 flexible cables on the Relay Board. FP0001-FP0003, FP0004 and FP0005.

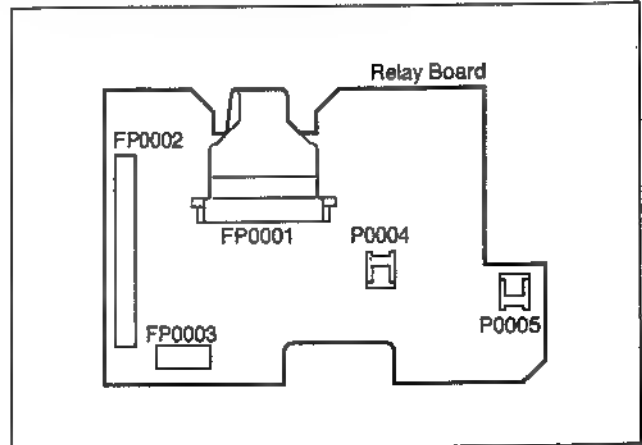


Fig. 3-B Relay Board

2. Remove the 3 screws, so that, traverse Unit can be separated into two sections.

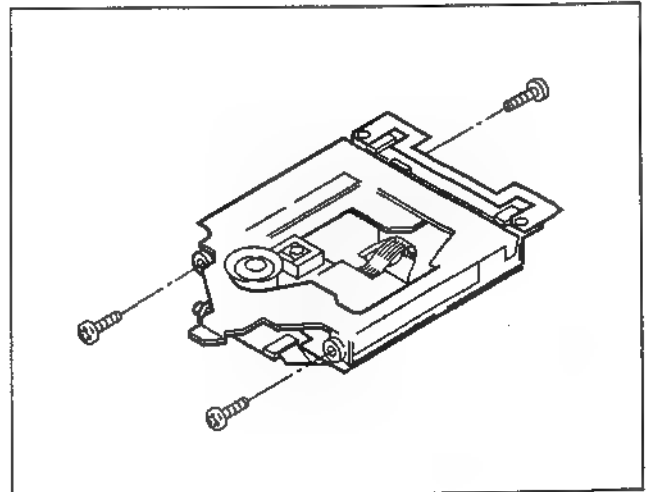


Fig. 3-C Disassembly of the Traverse Unit

### 3-1. Replacing the Laser Pick-Up

1. Remove the 2 screws.
2. Remove the Laser Pick-Up.

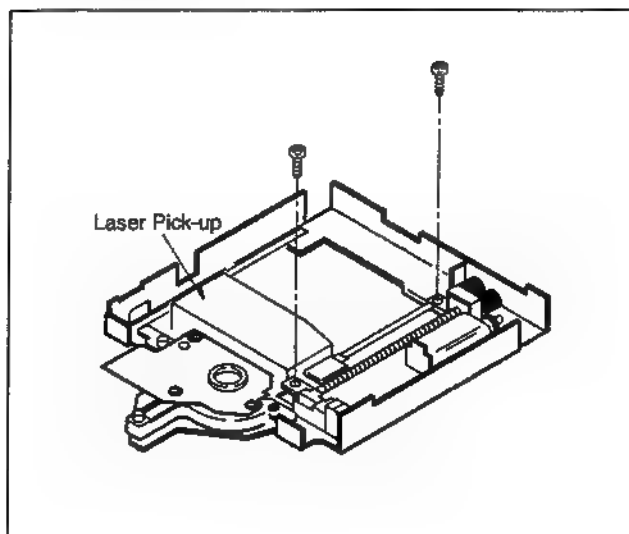


Fig. 3-1 Replacement of the Laser Pick-up

### 3-2. Replacing the Traverse Motor Unit

1. After the Laser Pick-Up has been removed, remove the 2 screws.
2. Remove the Traverse Motor Unit.

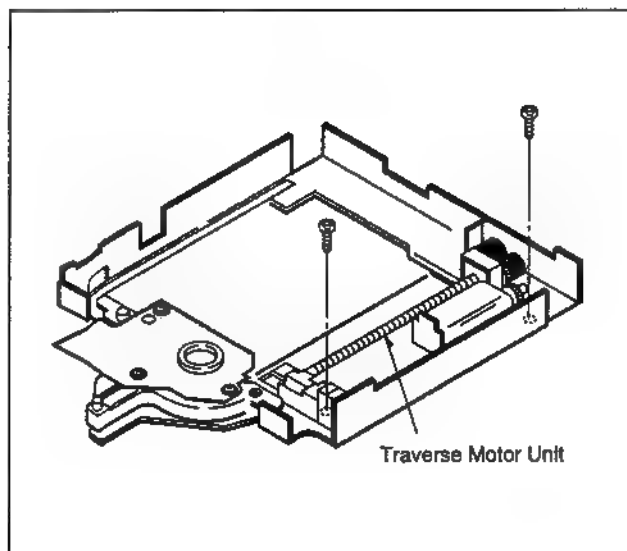


Fig. 3-2 Replacement of the Traverse Motor Unit

### 3-3. Replacing the Disc Motor

1. This disc motor can be removed after the Traverse Unit has been separated into two sections.
2. Remove the 2 screws A.
3. Remove the 2 screws B using an Hex. wrench.

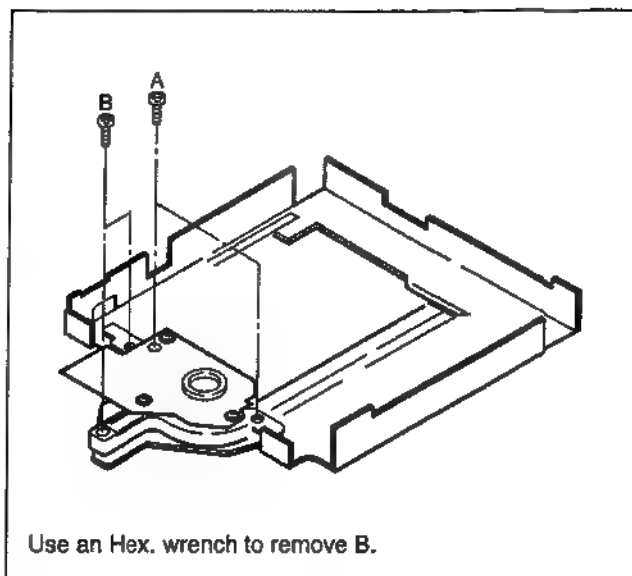


Fig. 3-3 Replacement of the Disc Motor

Note: It is not necessary to remove the Laser Pick-Up for replacement of the Disc Motor.

### 3-4. Disc Motor Assembly/Tentative Tilt Adjustment

1. For the Disc Motor assembling, install the 2 Screw B (adjustment screw) after firmly tightening the 2 Screws A. (Refer to the figure 3-3.)
2. Use the 2 Screws B to temporarily set the Disc Motor so that it rests parallel to the Base.

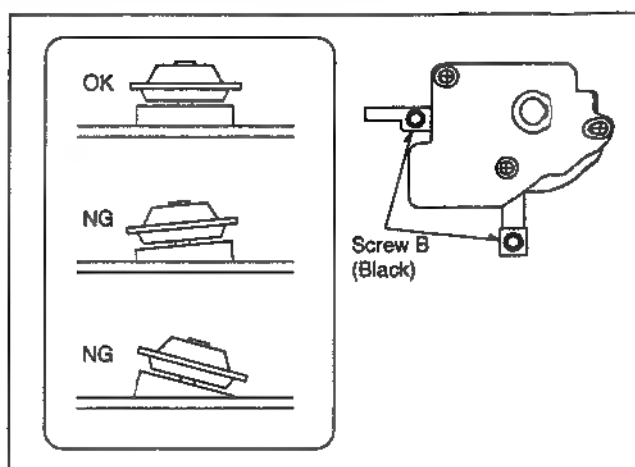


Fig. 3-4 Disc Motor Assembling

3. For final adjustment, proceed the Tilt Adjustment of Disc Motor (Page 2-12).

### 3-5. Others

1. Reassemble the Laser Pick-Up and the Traverse Motor Unit in precisely the reverse order as they were disassembled.
2. After reassemble the Laser Pick-up and the Traverse Motor Unit, perform the Tilt Adjustment of Disc Motor (Page 2-12).

## 4. Printed Circuit Board Location and Wiring Connection Diagram

### 4-1. Printed Wiring Board Location

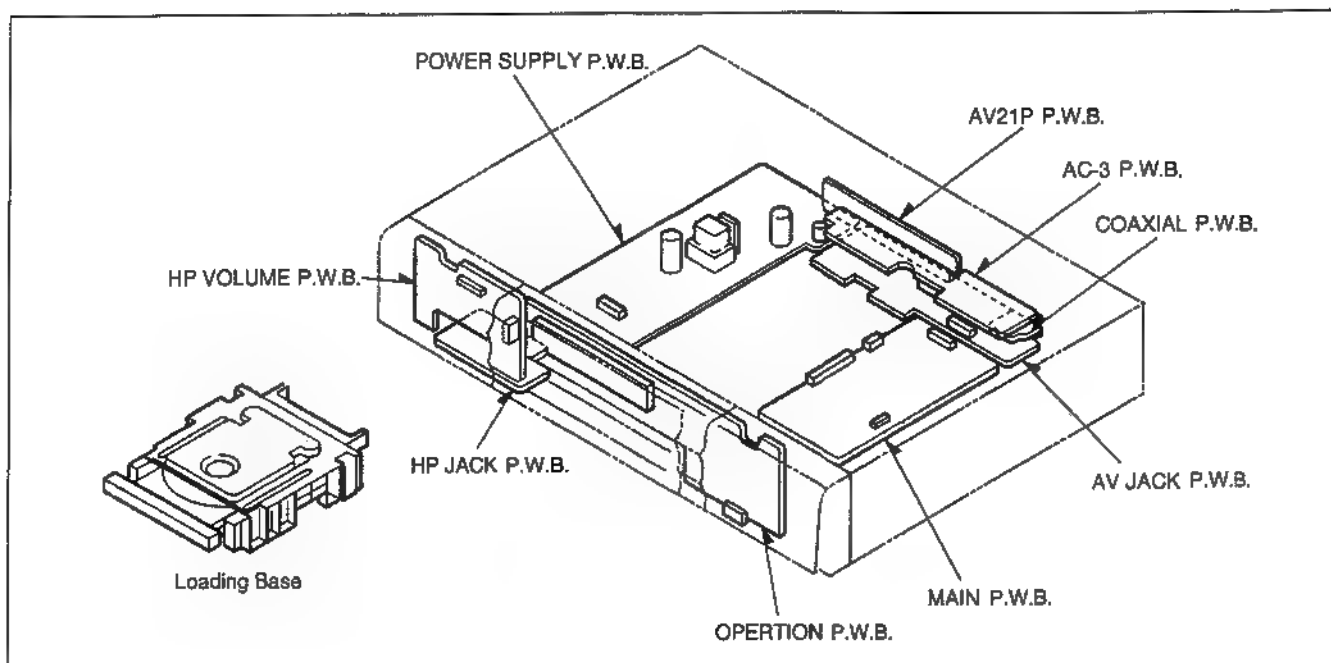
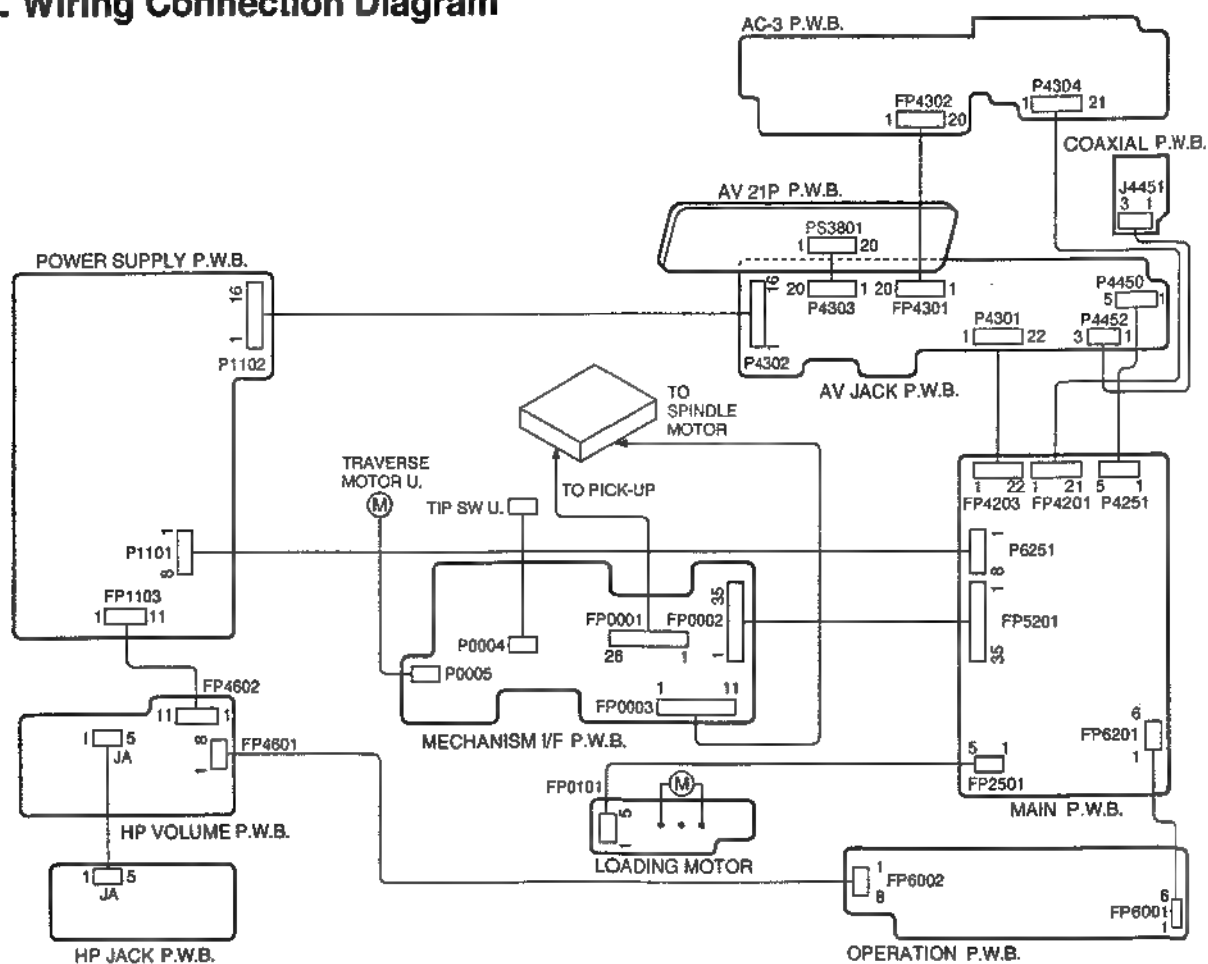


Fig. 4-1 Printed Circuit Board Location

### 4-2. Wiring Connection Diagram



## 5. Disassembly and Check Method of Printed Circuit Board Assembly (P.W.B.)

### 5-1. Replacing the Main P.W.B.

1. Remove 4 screws and check the Main P.W.B.

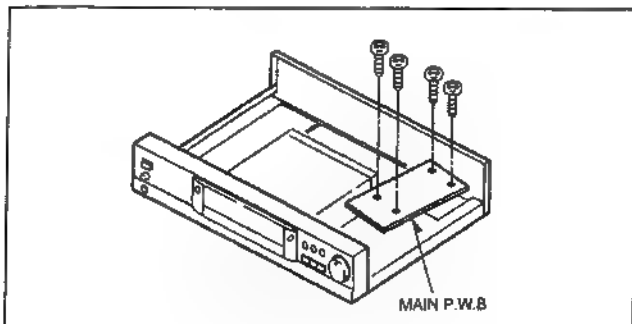


Fig. 5-1 Main P.W.B.

When the Main P.W.B. has been replaced, perform the Initialization.

### 5-2. Check Method of AV Jack C.B.A., AV21P P.W.B., AC-3 P.W.B., and COAXIAL P.W.B.

1. Remove 12 screws on the Rear Panel.

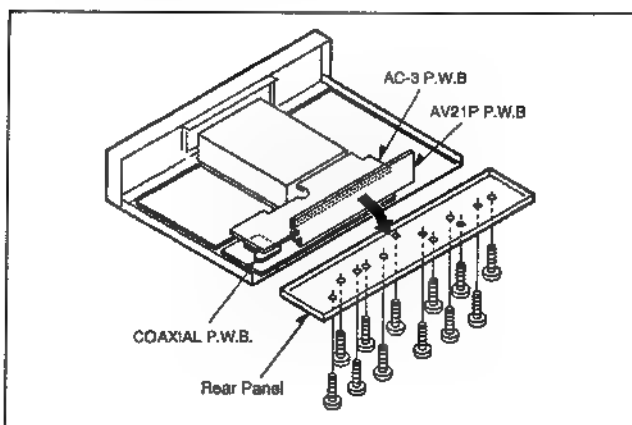


Fig. 5-2-1 Removal of the Rear Panel

2. Remove the AC-3 P.W.B. from the locking card spacer.
3. Remove 3 screws on the AV Jack P.W.B.  
Disconnect the Cable connected to the Power Supply P.W.B..

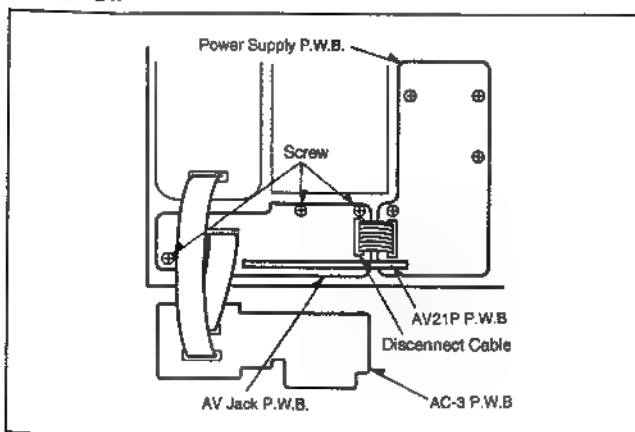


Fig. 5-2-2 AV Jack P.W.B.

### 5-3. Check Method of Power Supply P.W.B.

1. Remove 2 screws of the AC inlet on the Rear Panel.

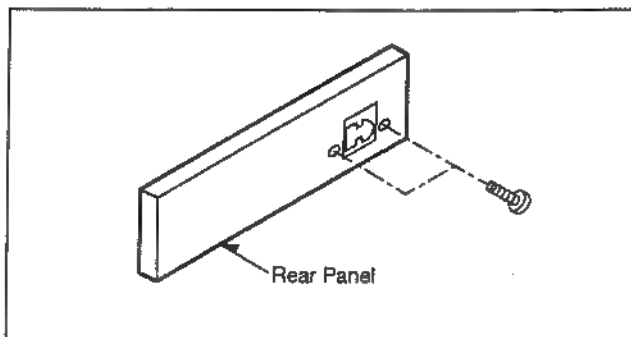


Fig. 5-3-1 AC INLET

2. Remove 4 screws on the Power Supply P.W.B.  
Disconnect the Cable connected to the AV Jack P.W.B.

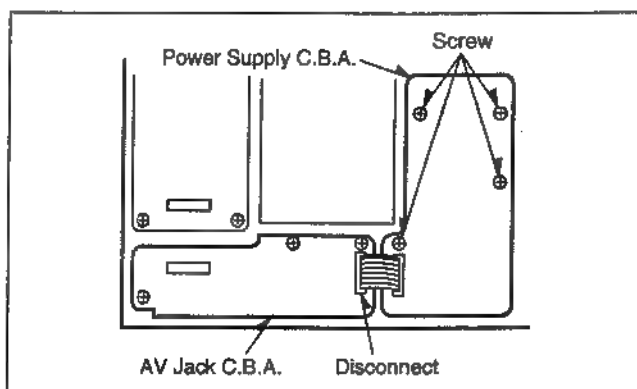


Fig. 5-3-2 Power Supply P.W.B.

### 5-4. Check Method of Operation P.W.B.

1. Refer to the disassembly procedure (Item 1-2.), and remove the Front Panel.
2. Check the Operation P.W.B. as the figure shown below.

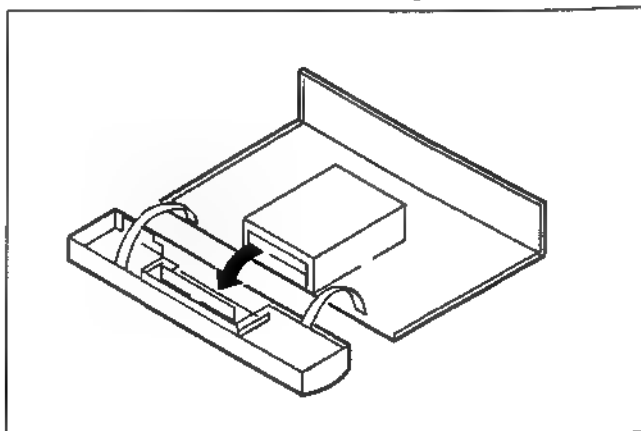


Fig. 5-4 Operation P.W.B.

When the Operation P.W.B. has been replaced, perform the Initialization.

## 6. Electrical Adjustment Procedures

### Equipment Necessary for Adjustment

1. Measuring Equipments  
General measuring equipments including an oscilloscope.
2. DVD Test Disc  
Part No. DVDT-S01 (Single Layer)
3. Video-CD/CD-DA Test Disc  
Part No. PVCD\_K06
4. Multi-system TV Monitor
5. Others  
Conventional tools, Hex. wrench 2.0 mm, etc.

### 6-1. Tilt Adjustment of Disc Motor

After replacing parts in the Traverse Unit, it is necessary to adjust the Tilt Adjustment of Disc motor from bottom side. Please follow the following procedures for adjusting:

#### Caution:

1. Optical adjustment inside the laser pick-up is not possible.
2. Prior to adjusting, take countermeasures to prevent damage from static electricity.

When the following parts have been replaced, disc motor adjustment will be required.

1. The disc motor.
2. The laser pick-up.
3. The Traverse motor unit.
4. The parts around the laser pick-up (rail, etc.).

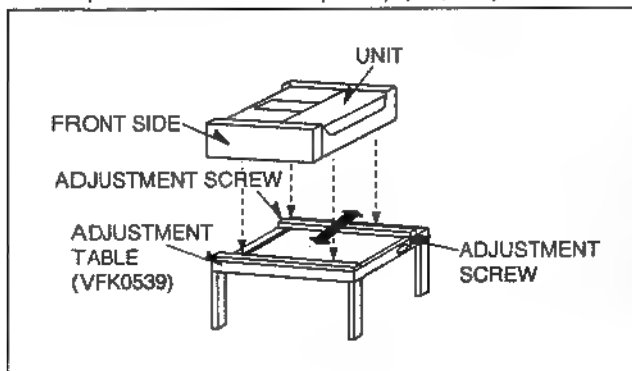


Fig. 6-1-1 Adjustment Table

Use a hex. wrench (2.0 mm) to adjust from the hole of the bottom plate.

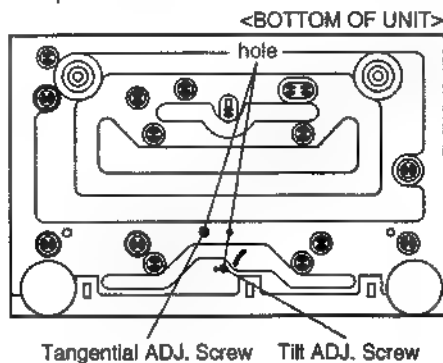


Fig. 6-1-2 Adjustment Hole of the Bottom Plate

| Measurement Point                            | Adjustment Point            | Mode  | Test Disc |
|--|-----------------------------|---|-----------|
| TL5206<br>GND: Chassis                       | Tilt<br>adjustment<br>screw | Play title 8,<br>Pause  | DVDT-S01  |
| Measuring Equipment                          |                             | Adjustment Value  |           |
| Oscilloscope<br>DC 500mV/div., 20 msec./div. |                             | Adjust until the bottom section of the waveform becomes flat and the DC components are minimum. |           |

Table 6-1 Tilt Adjustment

1. Play back the DVD test disc and then place the unit in play mode with title 8, then push the Pause button.
2. At first, Adjust Tangential Adjustment Screw then adjust Tilt Adjustment Screw with the Hex Wrench (2.0 mm) from bottom side.  
Repeat 2 to 3 times alternately until the waveform at TL5206 indicated below is obtained.  
Final adjustment should be Tilt Adjustment.
  - The valley sections of the waveform should be as flat as possible.
  - The total DC level should be obtained minimized as much as possible.
  - The waveform whisker sections will not disappear.



Fig. 6-1-3 Correct Tilt Adjustment Waveform

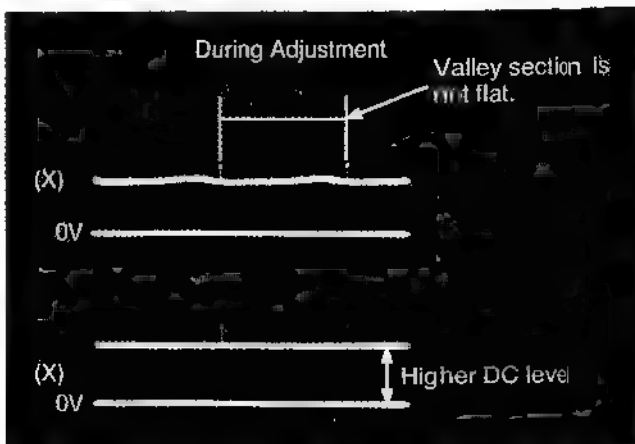


Fig. 6-1-4 Tilt Adjustment Waveform During Adjusting

After Adjusting Check the following

1. After adjusting by the DVD test disc, play a video CD or CD-DA and check that there is no abnormal operation.



The following adjustment is electrical adjustments. These adjustments are to be performed after replacing the printed wiring boards.

## 6-2. Video Output (Luminance Signal) Adjustment

| Measurement Point                          | Adjustment Point | Mode                              | Disc     |
|--|------------------|-----------------------------------|----------|
| Video Output Pin Terminal<br>GND: Chassis  | VR3232           | Playback Title 12<br>(Colour Bar) | DVDT-S01 |
| Measuring Device                           |                  | Adjustment Value                  |          |
| Oscilloscope<br>500 mV/div, 10 $\mu$ s/div |                  | 1000 $\pm$ 20 mV p-p              |          |

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Play back the color bar part Title 12 of the DVD Test Disc title.
3. Adjust the VR3232 so that the luminance signal output is as shown below.
4. Confirm the signal on the AV Jack board side.

**Adjustment Value = 1000  $\pm$  20 mV p-p**

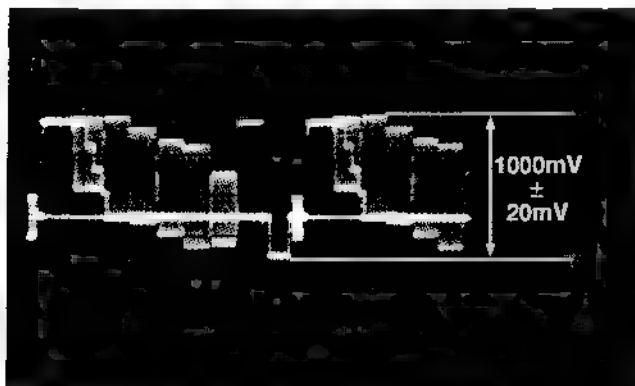


Fig. 6-2 Luminance Signal Output

## 6-3. Video Output (Chrominance Signal) Adjustment

| Measurement Point                          | Adjustment Point | Mode                              | Disc     |
|--|------------------|-----------------------------------|----------|
| Video Output Pin Terminal<br>GND: Chassis  | VR3233           | Playback Title 12<br>(Colour Bar) | DVDT-S01 |
| Measuring Device                           |                  | Adjustment Value                  |          |
| Oscilloscope<br>500 mV/div, 10 $\mu$ s/div |                  | 657 $\pm$ 13 mV p-p               |          |

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Play back the color bar part Title 12 of the DVD Test Disc title.
3. Adjust the VR3233 so that the chrominance (CYAN) signal output is as shown below.
4. Confirm the signal on the AV Jack board side.

**Adjustment Value = 657  $\pm$  13 mV p-p**

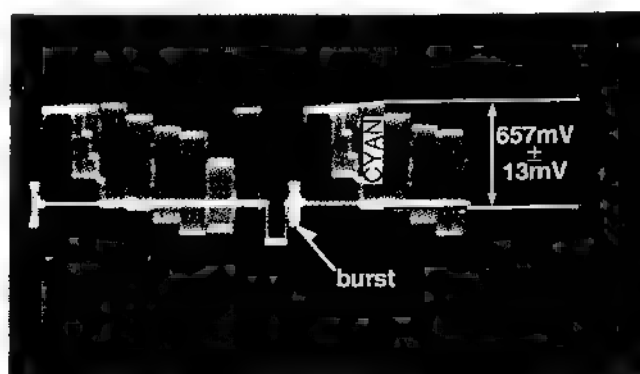


Fig. 6-3 Chrominance Signal Output

## 6-4. Video Output (Green Signal) Adjustment

| Measurement Point                          | Adjustment Point | Mode                                 | Disc     |
|--|------------------|--------------------------------------|----------|
| AV1-19PIN<br>AV1-11PIN                     | VR3231           | Playback<br>Title 10<br>(Colour Bar) | DVDT-S01 |
| Measuring Device                           |                  | Adjustment Value                     |          |
| Oscilloscope<br>500 mV/div, 10 $\mu$ s/div |                  | 700 $\pm$ 14 mV p-p                  |          |

<<NOTE>> AV1-11PIN and AV1-19PIN should be 75  $\Omega$  terminate.

For compatibility of video signal output.

1. Connect the monitor TV to the video output terminal and terminate at 75 Ohms.
2. Connect the oscilloscope to AV1-11Pin for CH-1 and AV1-19Pin for CH-2. (Trigger)
3. Play back the color bar part Title 10 of the DVD Test Disc title.
4. Adjust the VR3231 so that the green signal output is as shown below.
5. Confirm the signal on the AV21P board side.

Adjustment Value = 700  $\pm$  14 mV p-p

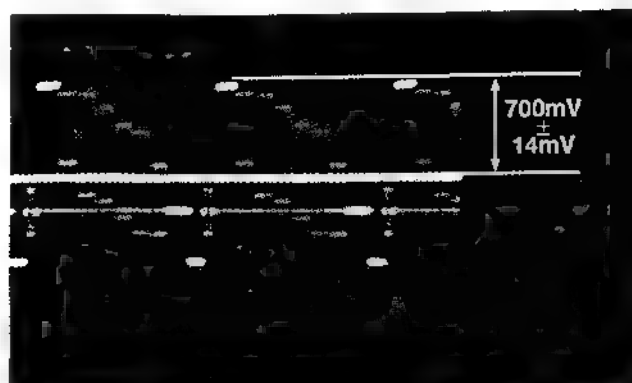


Fig. 6-4-1 Green Signal Output

## Test Points & Controls Location

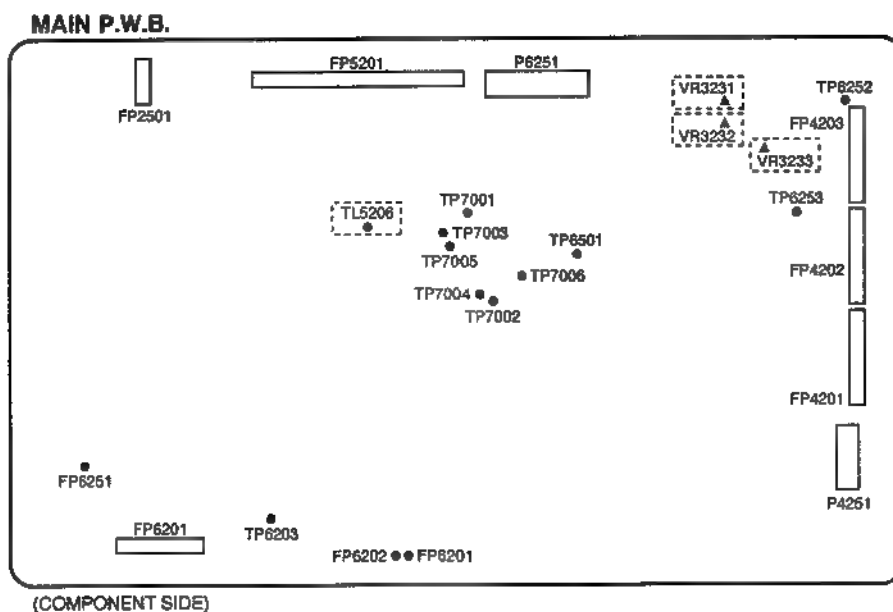
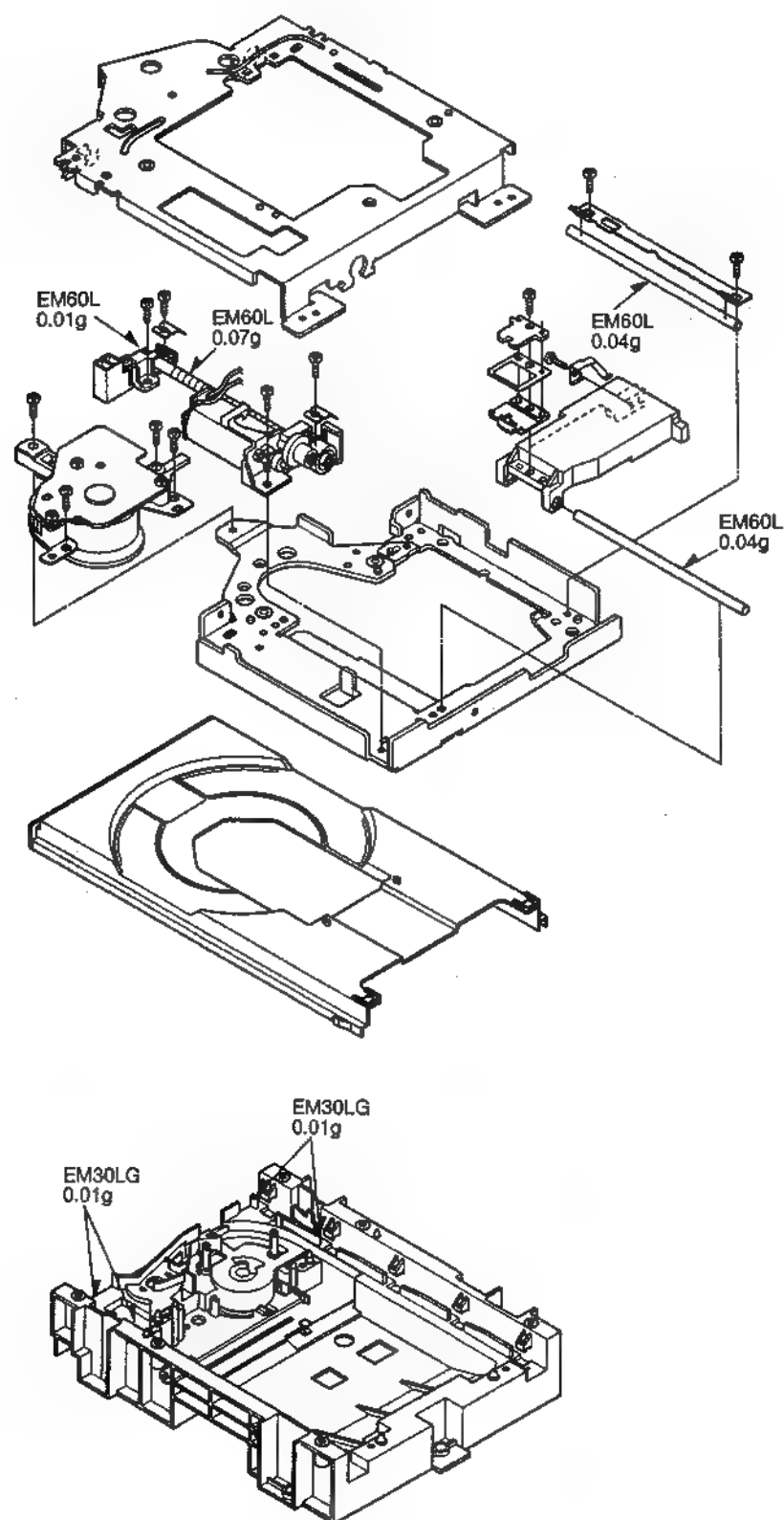


Fig. 6-4-2 Test Points & Controls Location

## 7. Lubrication Information



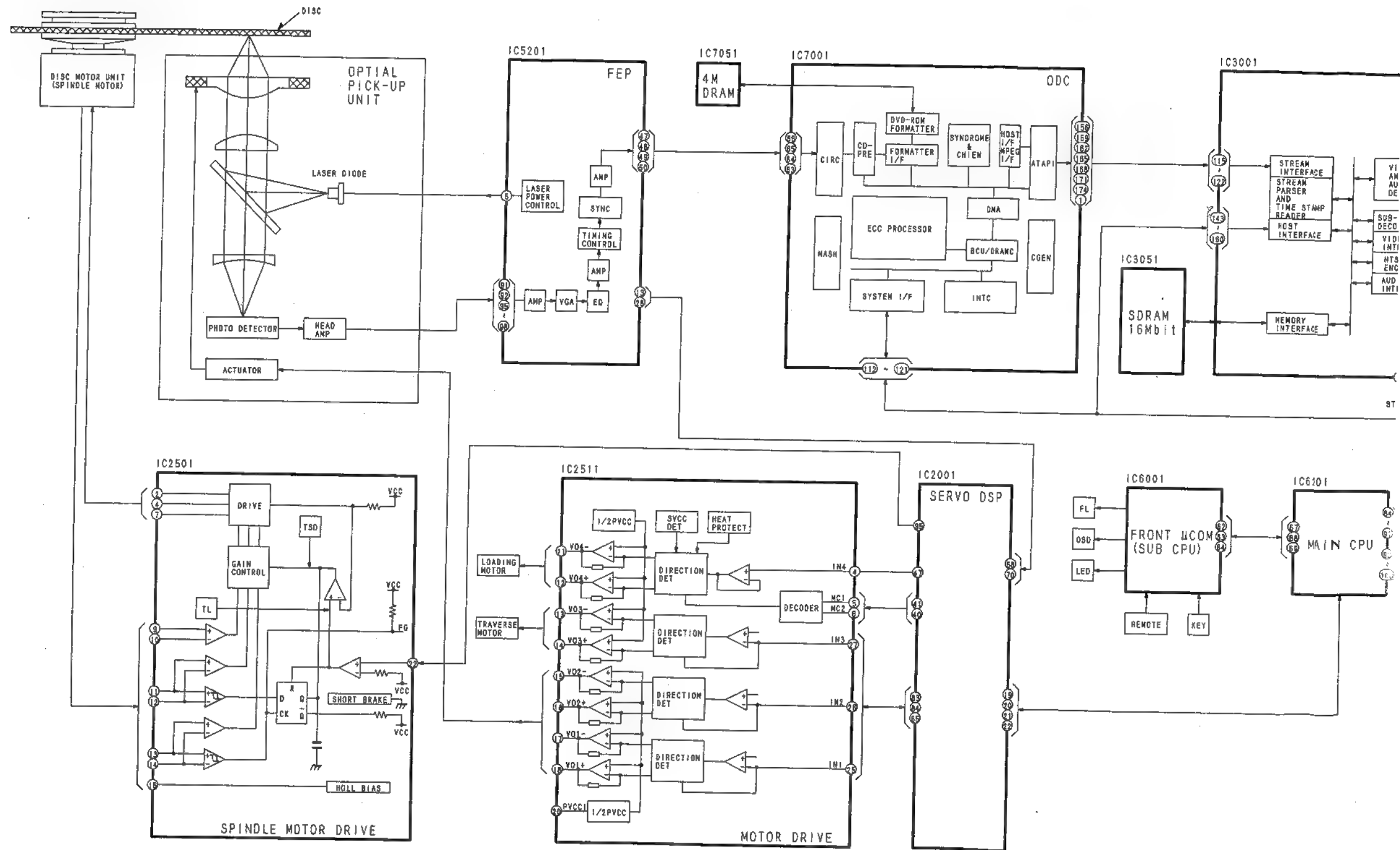
## SECTION 2 BLOCK DIAGRAM/SCHEMATIC DIAGRAM/ P.W. BOARD DIAGRAM

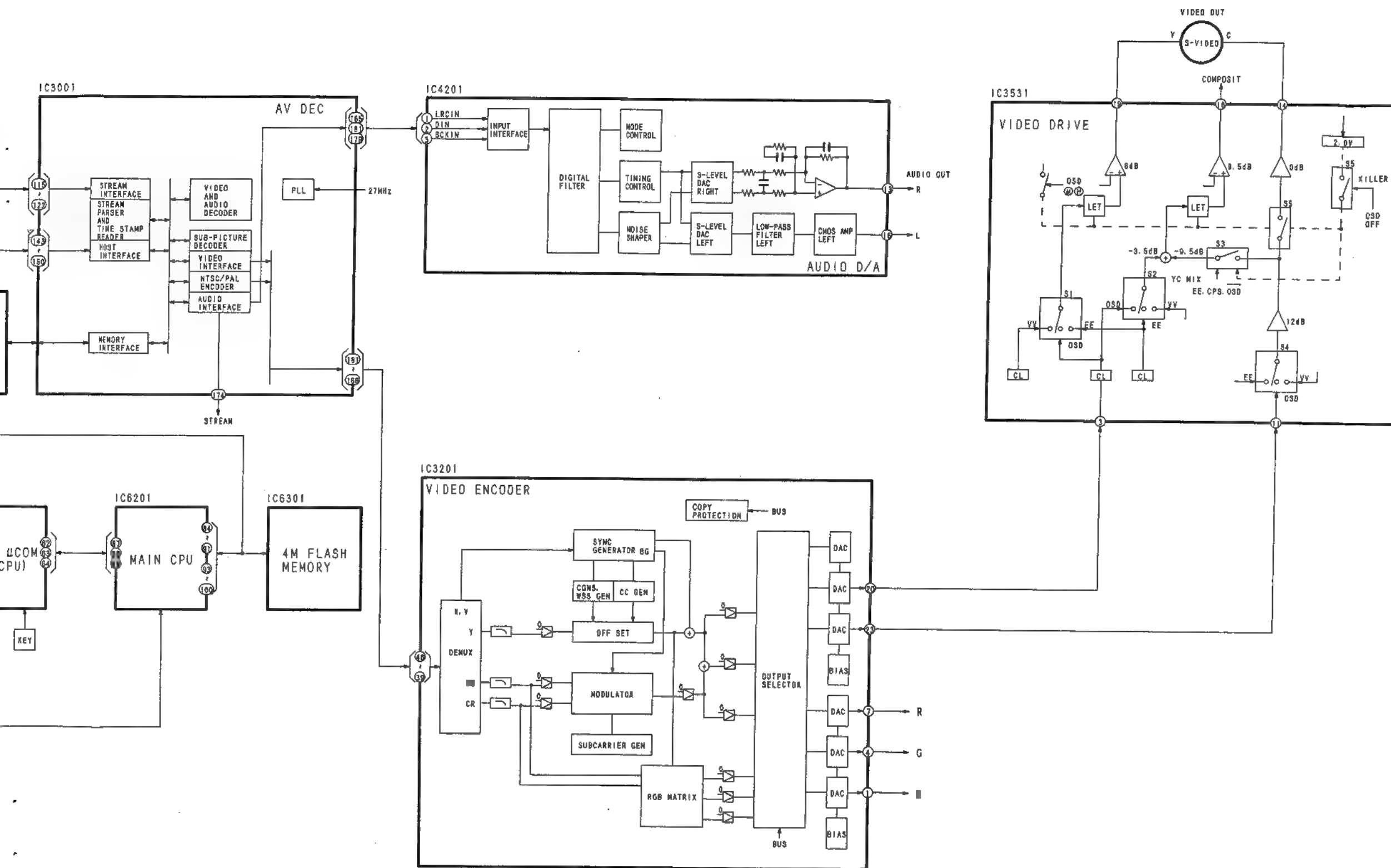
### 2-1. ABBREVIATIONS

| INITIAL/LOGO | ABBREVIATIONS  | INITIAL/LOGO | ABBREVIATIONS  |
|--------------|--|--------------|--|
| <b>A</b>     | A0~UP<br>ACLK<br>AD0~U#<br>ADATA<br>ALE<br>AMUTE<br>AREQ<br>ARF<br>ASI<br>ASO<br>ASYN  | <b>D</b>     | DSC<br>DSL<br>DVD  |
|              | ADDRESS<br>AUDIO CLOCK<br>ADDRESS BUS<br>AUDIO PES PACKET DATA<br>ADDRESS LATCH ENABLE<br>AUDIO MUTE<br>AUDIO PES PACKET REQUEST<br>AUDIO RF<br>SERVO AMP INVERTED INPUT<br>SERVO AMP OUTPUT<br>AUDIO WORD DISTINCTION SYNC  |              | DIGITAL SERVO CONTROLLER<br>DATA SLICE LOOP FILTER<br>DIGITAL VIDEO DISC   |
| <b>B</b>     | BCK<br>BCKIN<br>BDO<br>BLKCK<br>BOTTOM<br>BYP<br>BYTCK   | <b>E</b>     | EC<br>ECR<br>ENCSEL<br>ETMCLK<br>ETSCLK  |
|              | BIT CLOCK (PCM)<br>BIT CLOCK INPUT<br>BLACK DROP OUT<br>SUB CODE BLOCK CLOCK<br>CAP. FOR BOTTOM HOLD<br>BYPATH<br>BYTE CLOCK   |              | ERROR TORQUE CONTROL<br>ERROR TORQUE CONTROL<br>REFERENCE<br>ENCODER SELECT<br>EXTERNAL $\square$ CLOCK (81MHz/40.5MHz)<br>EXTERNAL S CLOCK (54MHz)  |
| <b>C</b>     | CAV<br>CBDO<br>CD<br>CDSCK<br>CDSRDATA<br>CDRF<br>CDV<br>CHNDATA<br>CKSL<br>CLV<br>COFTR<br>CPA<br>CPCS<br>CPDT<br>CPUADR<br>CPUADT<br>CPUIRQ<br>CPRD<br>CPWR<br>CS<br>CSYNIN<br>CSYNOUT   | <b>F</b>     | FBAL<br>FCLK<br>FE<br>FFI<br>FEO<br>FG<br>FSC<br>FSCK  |
|              | CONSTANT AUGULAS VELOCITY<br>CAP. BLACK DROP OUT<br>COMPACT DISC<br>CD SERIAL DATA CLOCK<br>CD SERIAL DATA<br>CD RF (EFM) SIGNAL<br>COMPACT DISC-VIDEO<br>CHANNEL DATA<br>SYSTEM CLOCK SELECT<br>CONSTANT LINEAR VELOCITY<br>CAP. OFF TRACK<br>CPU ADDRESS<br>CPU CHIP SELECT<br>CPU DATA<br>CPU ADDRESS LATCH<br>CPU ADDRESS DATA BUS<br>CPU INTERRUPT REQUEST<br>CPU READ ENABLE<br>CPU WRITE ENABLE<br>CHIP SELECT<br>COMPOSITE SYNC IN<br>COMPOSITE SYNC OUT |              | FOCUS BALANCE<br>FRAME CLOCK<br>FOCUS ERROR<br>FOCUS ERROR AMP INVERTED INPUT<br>FOCUS ERROR AMP OUTPUT<br>FREQUENCY GENERATOR<br>FREQUENCY SUB CARRIER<br>FS (384 OVER SAMPLING) CLOCK  |
| <b>D</b>     | DACCK<br>DEEMP<br>DEMPH<br>DIG0~UP<br>DIN<br>DMSRCK<br>DMUTE<br>DO<br>DOUT0~UP<br>DRF<br>DRPOUT<br>DREQ<br>DRESP   | <b>G</b>     | GND  |
|              | D/A CONVERTER CLOCK<br>DEEMPHASIS BIT ON/OFF<br>DEEMPHASIS SWITCHING<br>FL DIGIT OUTPUT<br>DATA INPUT<br>DM SERIAL DATA READ CLOCK<br>DIGITAL MUTE CONTROL<br>DROP OUT<br>DATA OUTPUT<br>DATA SLICE RF (BIAS)<br>DROP OUT SIGNAL<br>DATA REQUEST<br>DATA RESPONSE  |              | COMMON GROUNDING (EARTH)   |
| <b>E</b>     |  | <b>H</b>     | HA0~UP<br>HD0~UP<br>HINT<br>HRXW   |
|              |  |              | HOST ADDRESS<br>HOST DATA<br>HOST INTERRUPT<br>HOST READ/WRITE   |
| <b>F</b>     |  | <b>I</b>     | IECOUT<br>IPFLAG<br>IREF<br>ISEL   |
|              |  |              | IEC958 FORMAT DATA OUTPUT<br>INTERPOLATION FLAG<br>I (CURRENT) REFERENCE<br>INTERFACE MODE SELECT  |
| <b>G</b>     |  | <b>L</b>     | LDON<br>LPC<br>LRCK  |
|              |  |              | LASER DIODE CONTROL<br>LASER POWER CONTROL<br>L CH/R CH DISTINCTION CLOCK  |
| <b>H</b>     |  | <b>M</b>     | MA0~UP<br>MCK<br>MCKI<br>MCLK<br>MDATA<br>MDQ0~UP<br>MDQM<br>MLD<br>MPEG   |
|              |  |              | MEMORY ADDRESS<br>MEMORY CLOCK<br>MEMORY CLOCK INPUT<br>MEMORY SERIAL COMMAND CLOCK<br>MEMORY SERIAL COMMAND DATA<br>MEMORY DATA INPUT/OUTPUT<br>MEMORY DATA I/O MASK<br>MEMORY SERIAL COMMAND LOAD<br>MOTION PICTURE IMAGE CODING<br>EXPERT GROUP |
| <b>I</b>     |  | <b>O</b>     | ODC<br>OFTR<br>OSCI<br>OSCO<br>OSD   |
|              |  |              | OPTICAL DISC CONTROLLER<br>OFF TRACKING<br>OSCILLATOR INPUT<br>OSCILLATOR OUTPUT<br>ON SCREEN DISPLAY  |
| <b>J</b>     |  | <b>P</b>     | P1~UP<br>PCD<br>PCK  |
|              |  |              | PORT<br>CD TRACKING PHASE DIFFERENCE<br>PLL CLOCK  |

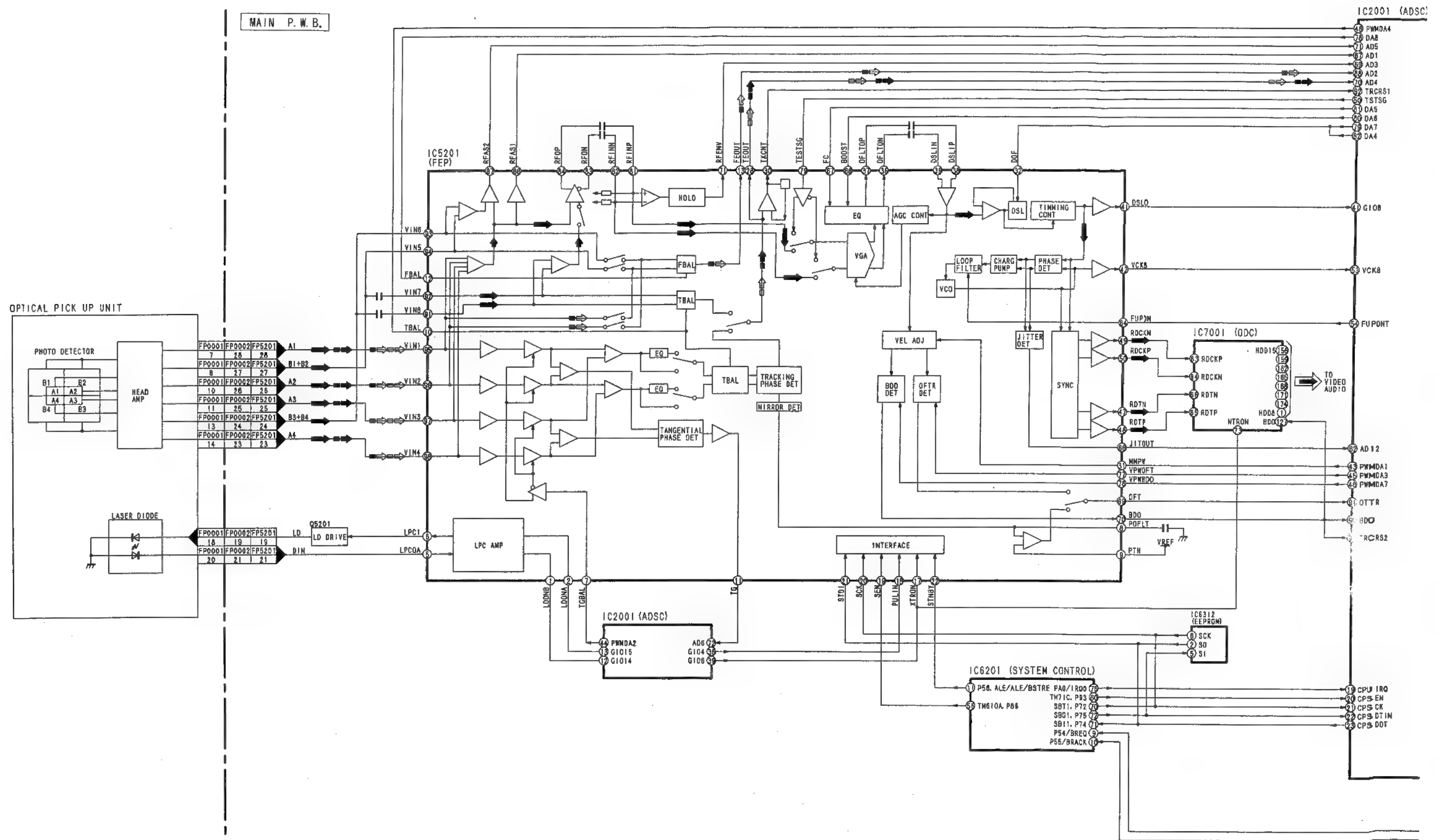
| INITIAL/LOGO | ABBREVIATIONS   | INITIAL/LOGO | ABBREVIATIONS   |
|--------------|---|--------------|---|
| <b>P</b>     | PDVD<br>PEAK<br>PLLCLK<br>PLLOCK<br>PWMCTL<br>PWMDA<br>PWMOA, B   | <b>Q</b>     | QTRON<br>QTRSON   |
|              | DVD TRACKING PHASE DIFFERENCE<br>CAP. FOR PEAK HOLD<br>CHANNEL PLL CLOCK<br>PLL LOCK<br>PWM OUTPUT CONTROL<br>PULSE WAVE MOTOR DRIVE A<br>PULSE WAVE MOTOR OUT A, B   |              | TRACKING ON<br>TRAVERSE SERVO ON  |
| <b>R</b>     | RE<br>RFENV<br>RFO<br>RS<br>RSEL<br>RST<br>RSV  | <b>V</b>     | VBLANK<br>VCC<br>VCDCONT<br>VDD<br>VFB<br>VREF<br>VSS   |
|              | READ ENABLE<br>RF ENVELOPE<br>RF PHASE DIFFERENCE OUTPUT<br>(CD-ROM) REGISTER SELECT<br>RF POLARITY SELECT<br>RESET<br>RESERVE  |              | V BLANKING<br>COLLECTOR POWER SUPPLY<br>VOLTAGE<br>VIDEO CD CONTROL (TRACKING<br>BALANCE)<br>DRAIN POWER SUPPLY VOLTAGE<br>VIDEO FEED BACK<br>VOLTAGE REFERENCE<br>SOURCE POWER SUPPLY VOLTAGE  |
| <b>S</b>     | SBI0, 1<br>SBO0<br>SBT0, 1<br>SCK<br>SCKR<br>SCL<br>SCLK<br>SDA<br>SEG0~UP<br>SELCLK<br>SEN<br>SIN1, 2<br>SOUT1, 2<br>SPDI<br>SPDO<br>SPEN<br>SPRCLK<br>SPWCLK<br>SQCK<br>SQCX<br>SRDATA<br>SRMADR<br>SRMDT0~7<br>SS<br>STAT<br>STCLK<br>STD0~UP<br>STENABLE<br>STSEL<br>STVALID<br>SUBC<br>SBCK<br>SUBQ<br>SYSCLK  | <b>W</b>     | WAIT<br>WDCK<br>WEH<br>WSR  |
|              | SERIAL DATA INPUT<br>SERIAL DATA OUTPUT<br>SERIAL CLOCK<br>SERIAL DATA CLOCK<br>AUDIO SERIAL CLOCK RECEIVER<br>SERIAL CLOCK<br>SERIAL CLOCK<br>SERIAL DATA<br>FL SEGMENT OUTPUT<br>SELECT CLOCK<br>SERIAL PORT ENABLE<br>SERIAL DATA IN<br>SERIAL DATA OUT<br>SERIAL PORT DATA INPUT<br>SERIAL PORT DATA OUTPUT<br>SERIAL PORT R/W ENABLE<br>SERIAL PORT READ CLOCK<br>SERIAL PORT WRITE CLOCK<br>SUB CODE Q CLOCK<br>SUB CODE Q DATA READ CLOCK<br>SERIAL DATA<br>SRAM ADDRESS BUS<br>SRAM DATA BUS 0~7<br>START/STOP<br>STATUS<br>STREAM DATA CLOCK<br>STREAM DATA<br>STREAM DATA INPUT ENABLE<br>STREAM DATA POLARITY SELECT<br>STREAM DATA VALIDITY<br>SUB CODE SERIAL<br>SUB CODE CLOCK<br>SUB CODE Q DATA<br>SYSTEM CLOCK |              | BUS CYCLE WAIT<br>WORD CLOCK<br>WRITE ENABLE HIGH<br>WORD SELECT RECEIVER   |
| <b>T</b>     | TE<br>TIBAL<br>TID<br>TIN<br>TIP<br>TIS<br>TPSN<br>TPSO<br>TPSP<br>TRCRS  | <b>X</b>     | X<br>XALE<br>XAREQ<br>XCDROM<br>XCS<br>XCSYNC<br>XDS<br>XHSYNCO<br>XHINT<br>XI<br>XINT<br>XMW<br>XO<br>XRE<br>XSRMCE<br>XSRMOE<br>XSRMWE<br>XVCS<br>XVDS<br>XVSYNCO   |
|              | TRACKING ERROR<br>BALANCE CONTROL<br>BALANCE OUTPUT 1<br>BALANCE INPUT<br>BALANCE INPUT<br>BALANCE OUTPUT 2<br>OP AMP INPUT<br>OP AMP OUTPUT<br>OP AMP INVERTED INPUT<br>TRACK CROSS SIGNAL   |              | X'TAL<br>X ADDRESS LATCH ENABLE<br>X AUDIO DATA REQUEST<br>X CD ROM CHIP SELECT<br>X CHIP SELECT<br>X COMPOSITE SYNC<br>X DATA STROBE<br>X HORIZONTAL SYNC OUTPUT<br>XH INTERRUPT REQUEST<br>X'TAL OSCILLATOR INPUT<br>X INTERRUPT<br>X MEMORY WRITE ENABLE<br>X'TAL OSCILLATOR OUTPUT<br>X READ ENABLE<br>X SRAM CHIP ENABLE<br>X SRAM OUTPUT ENABLE<br>X SRAM WRITE ENABLE<br>X V-DEC CHIP SELECT<br>X V-DEC CONTROL BUS STROBE<br>X VERTICAL SYNC OUTPUT |

## 2-2. OVERALL BLOCK DIAGRAM





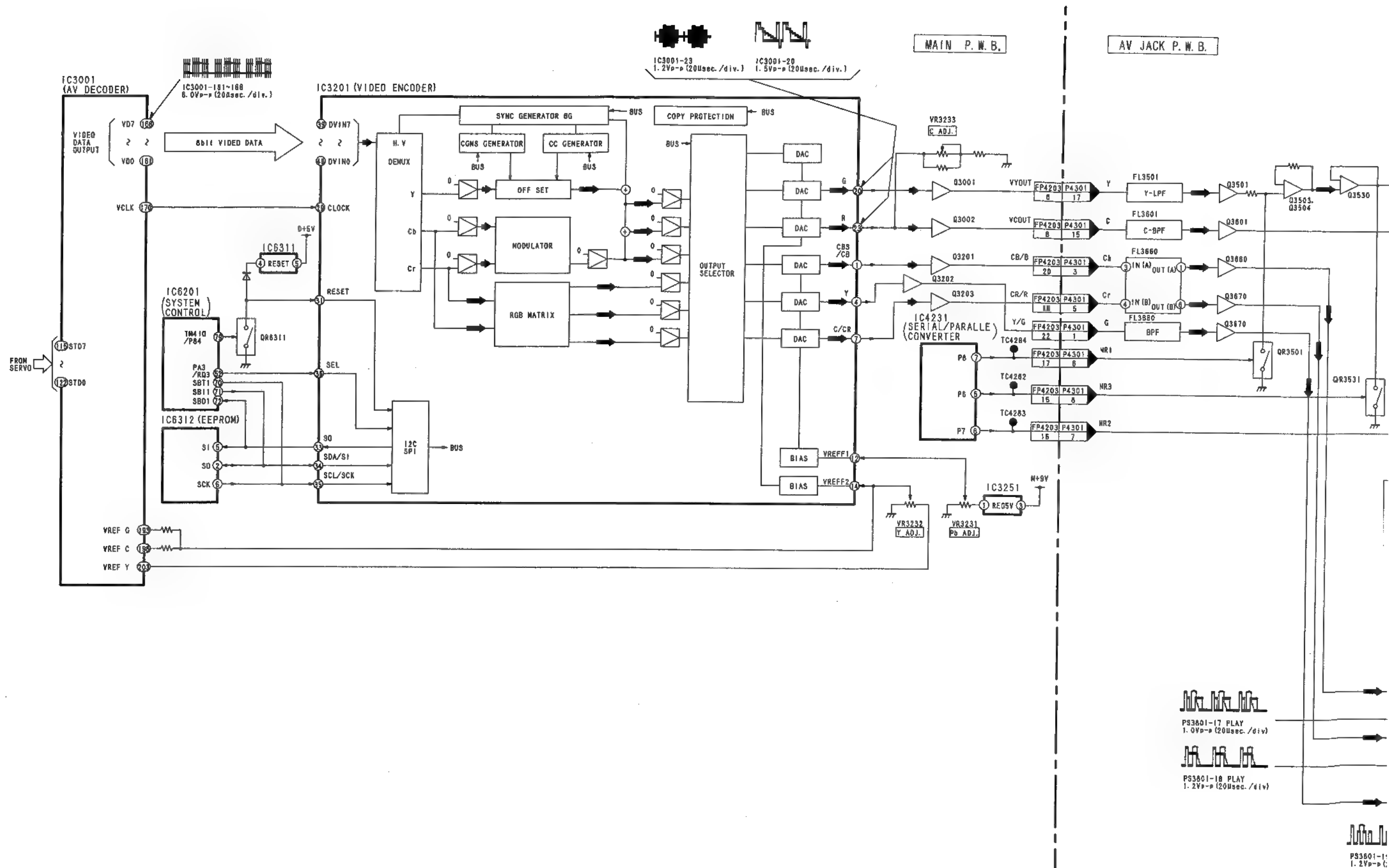
### 2-3. SERVO BLOCK DIAGRAM





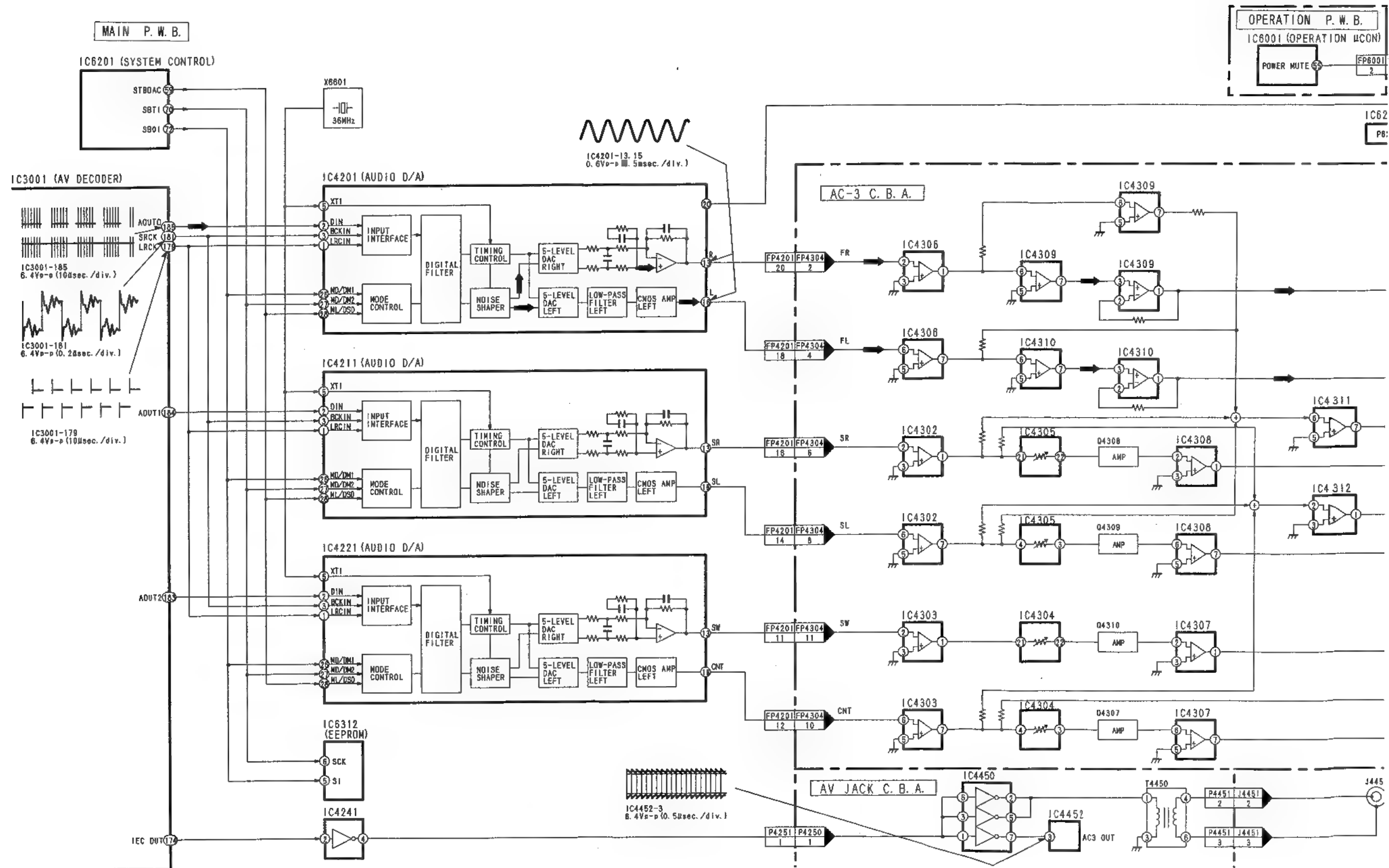


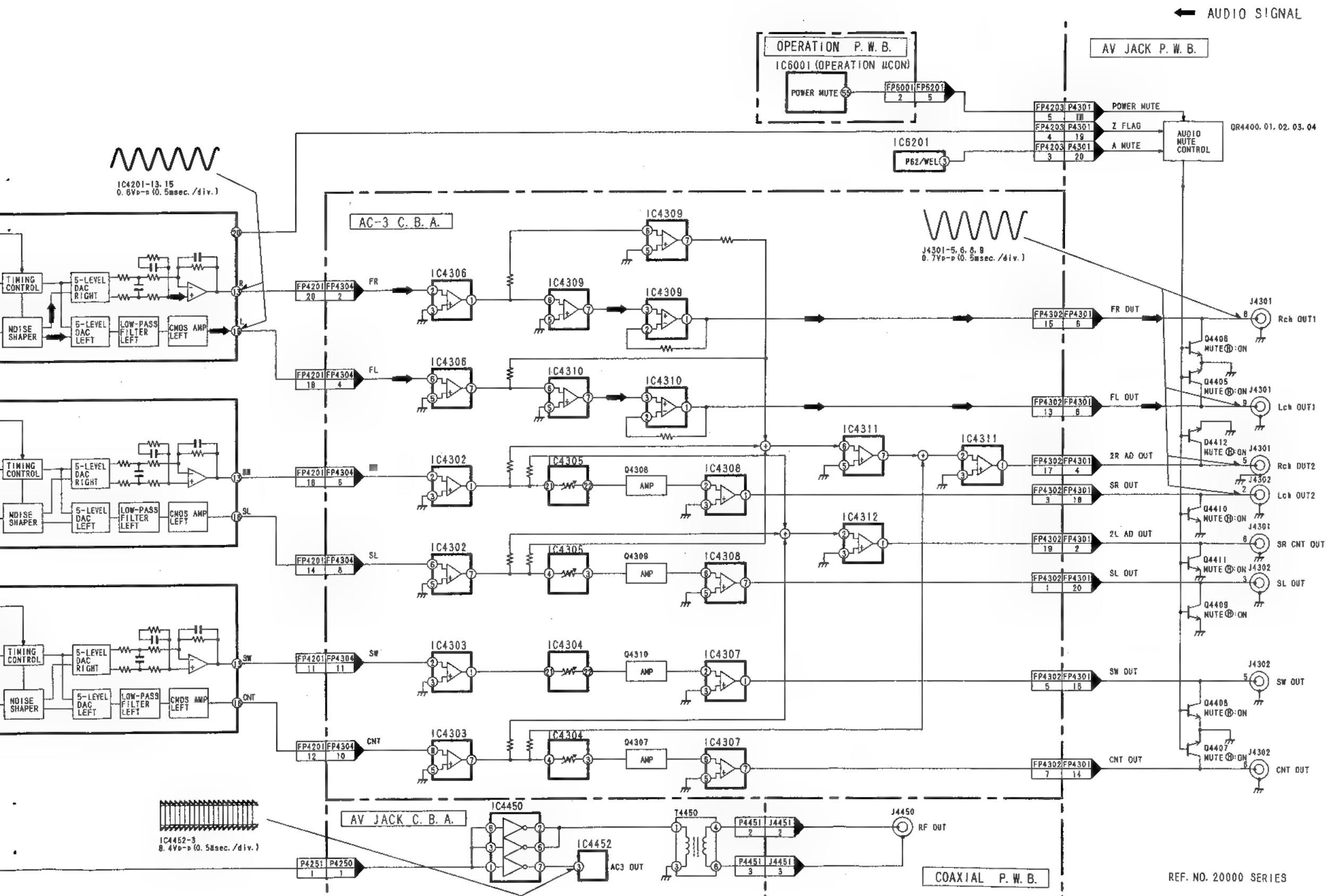
## 2-4. VIDEO BLOCK DIAGRAM





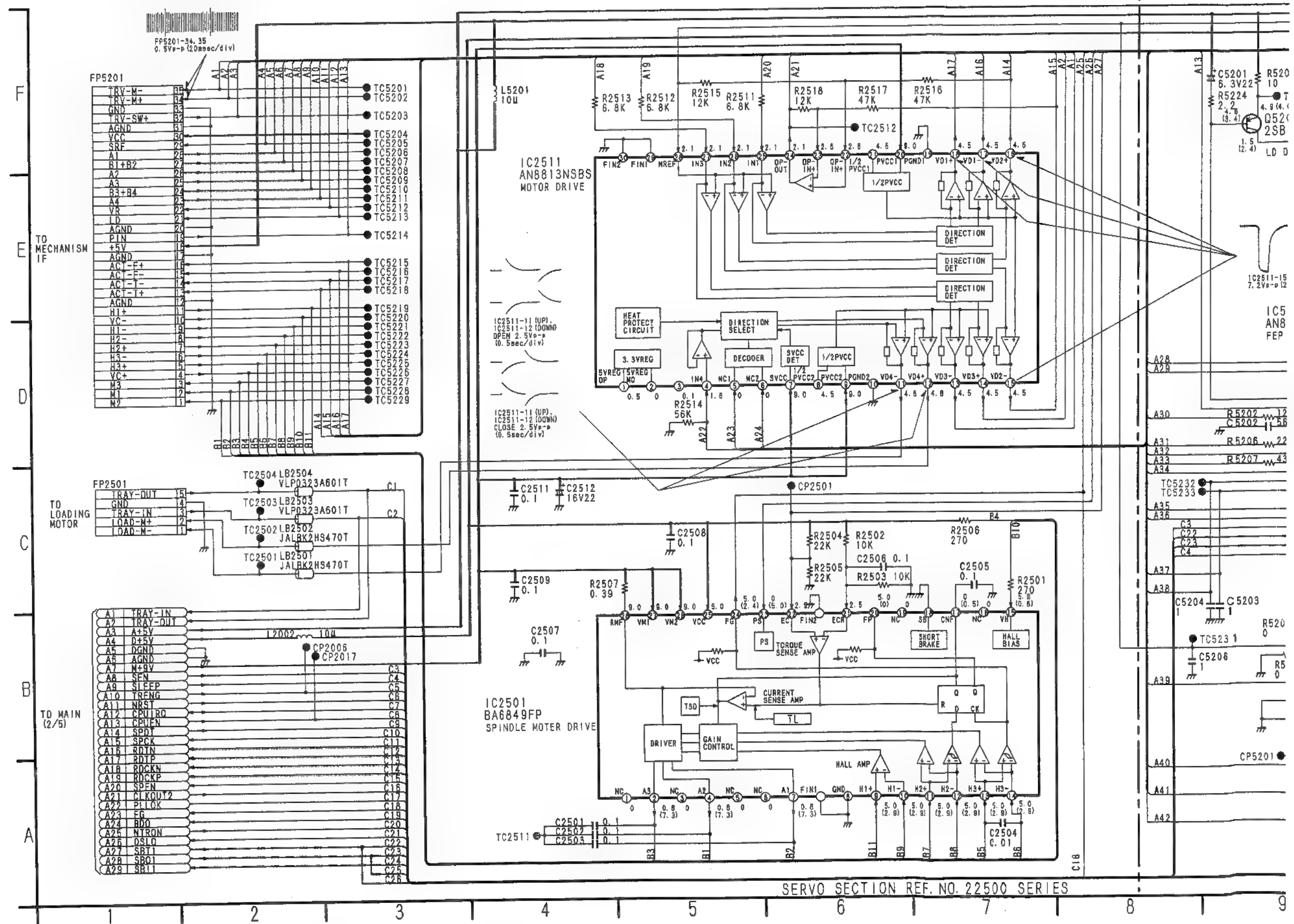
## 2-5. AUDIO BLOCK DIAGRAM

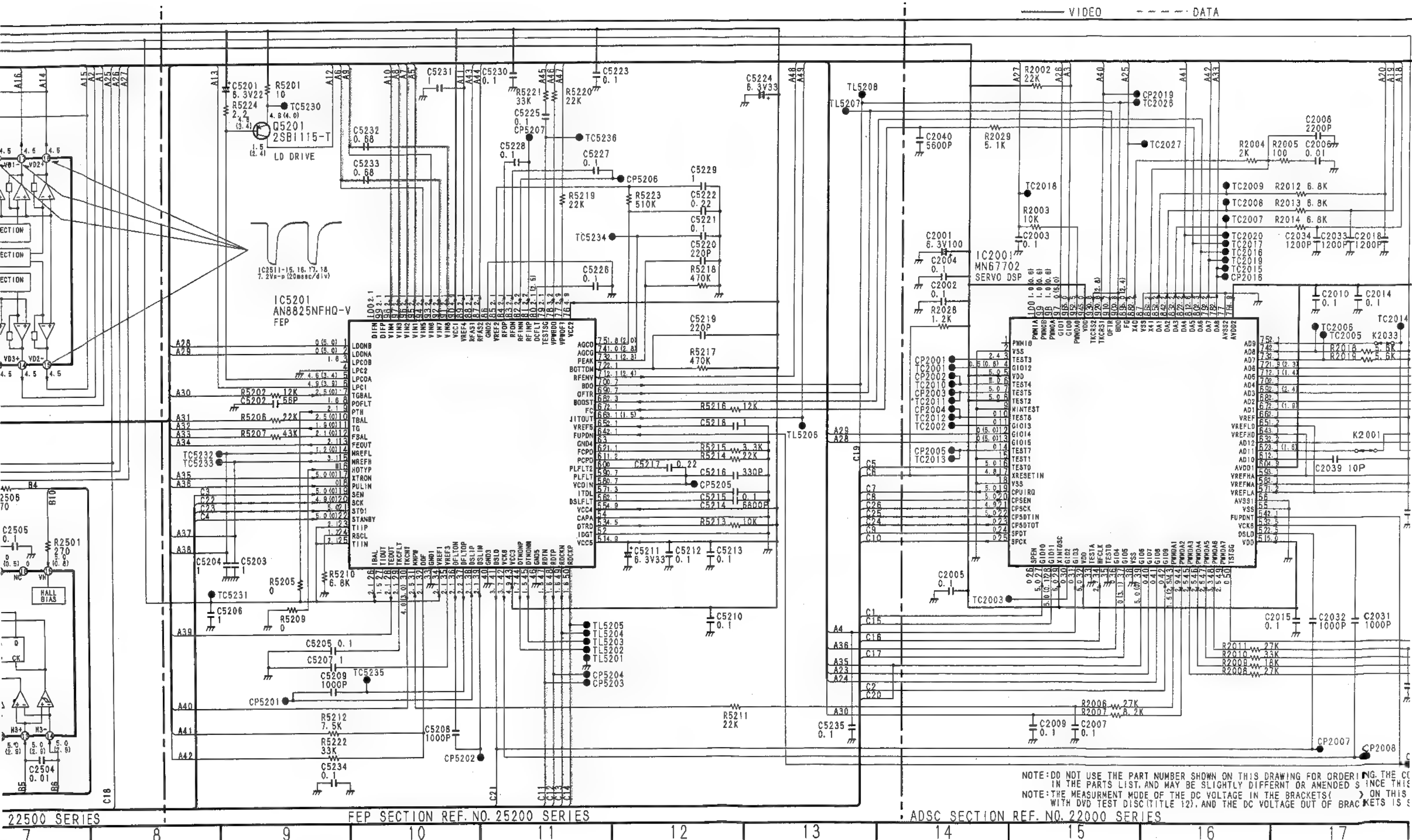




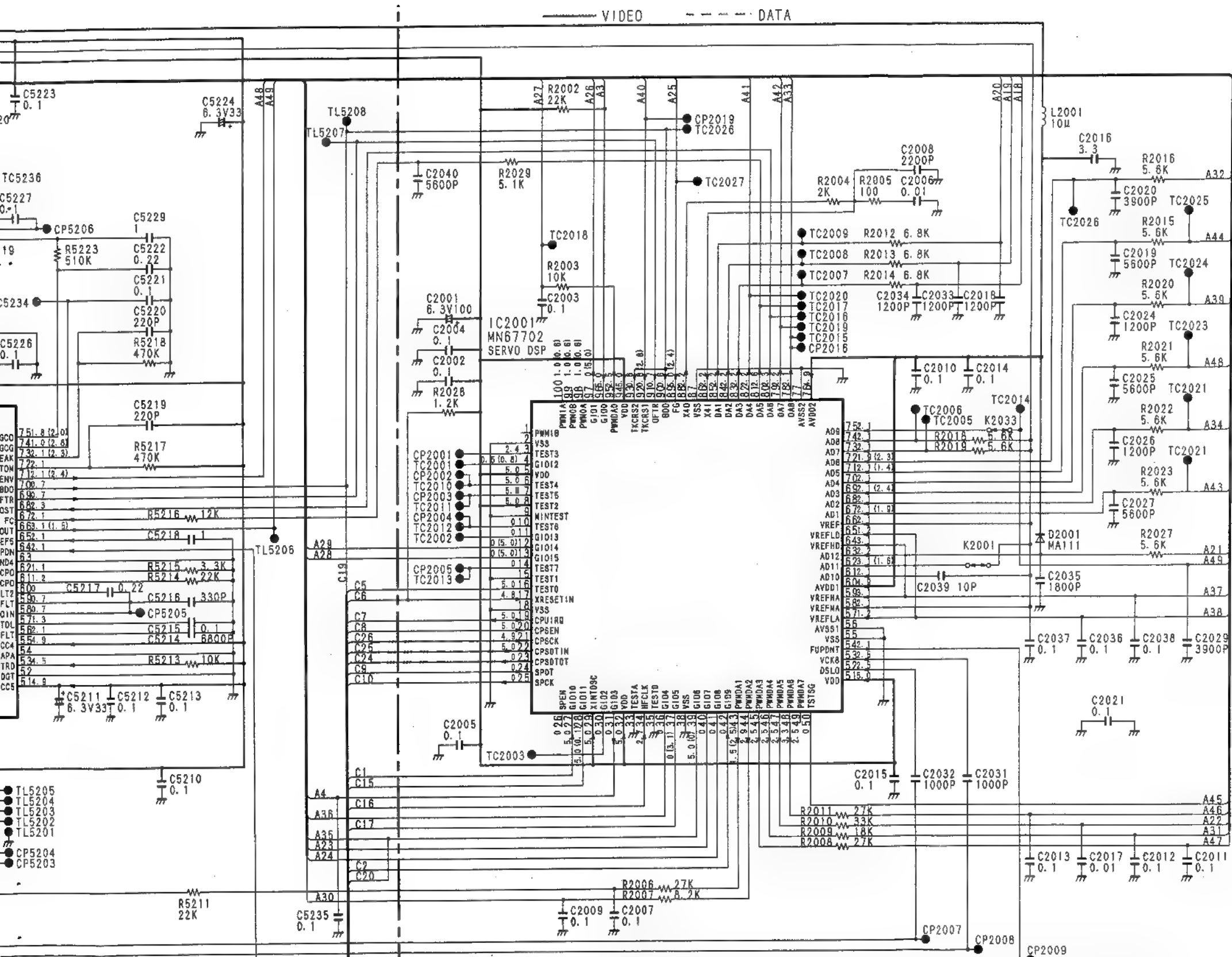
REF. NO. 20000 SERIES

## 2-6. FEP AND ADSC AND SERVO SECTION (MAIN P.W.B. <1/5>) SCHEMATIC DIAGRAM





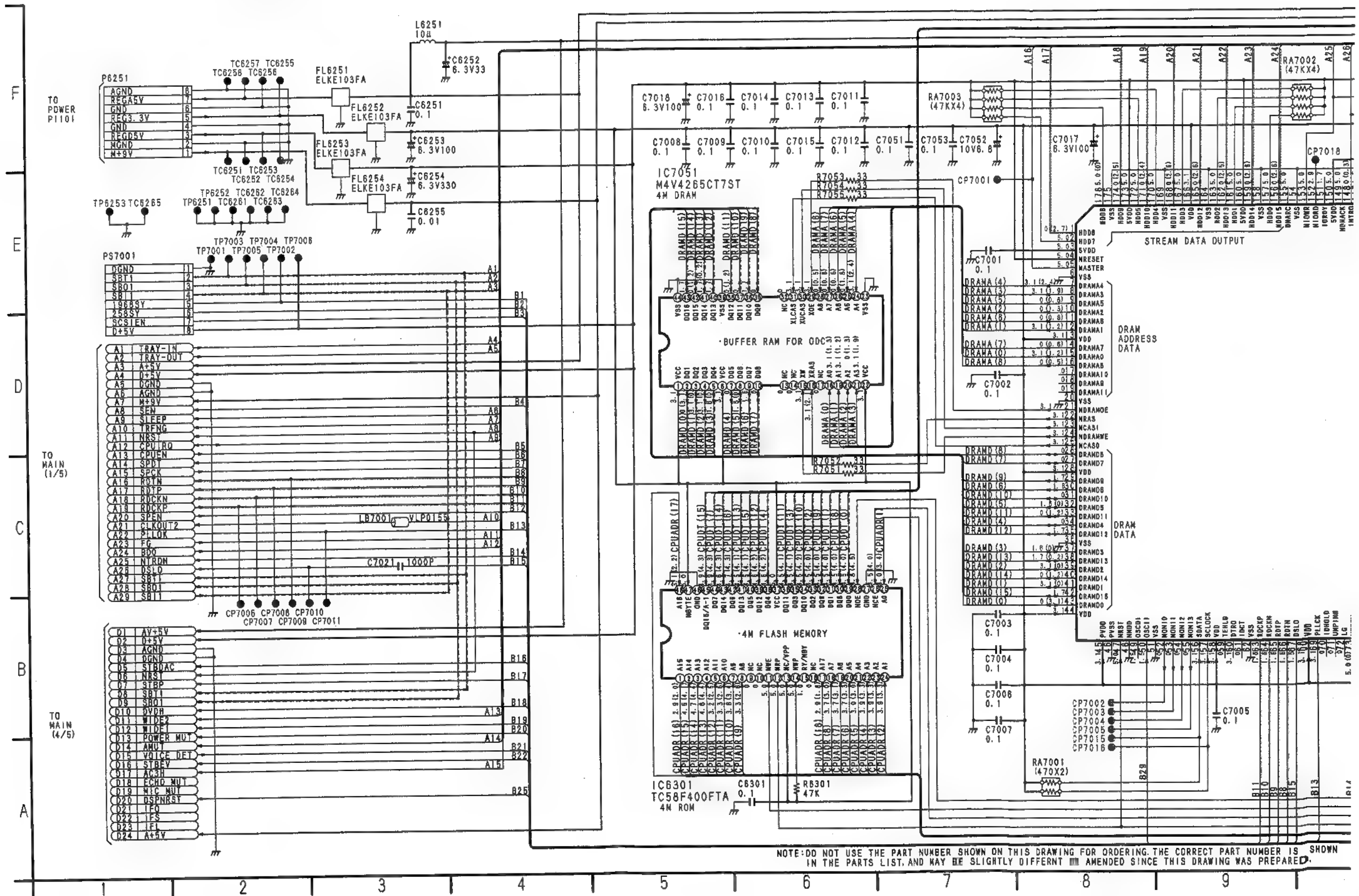
ADSC SECTION REF. NO. 22000 SERIES



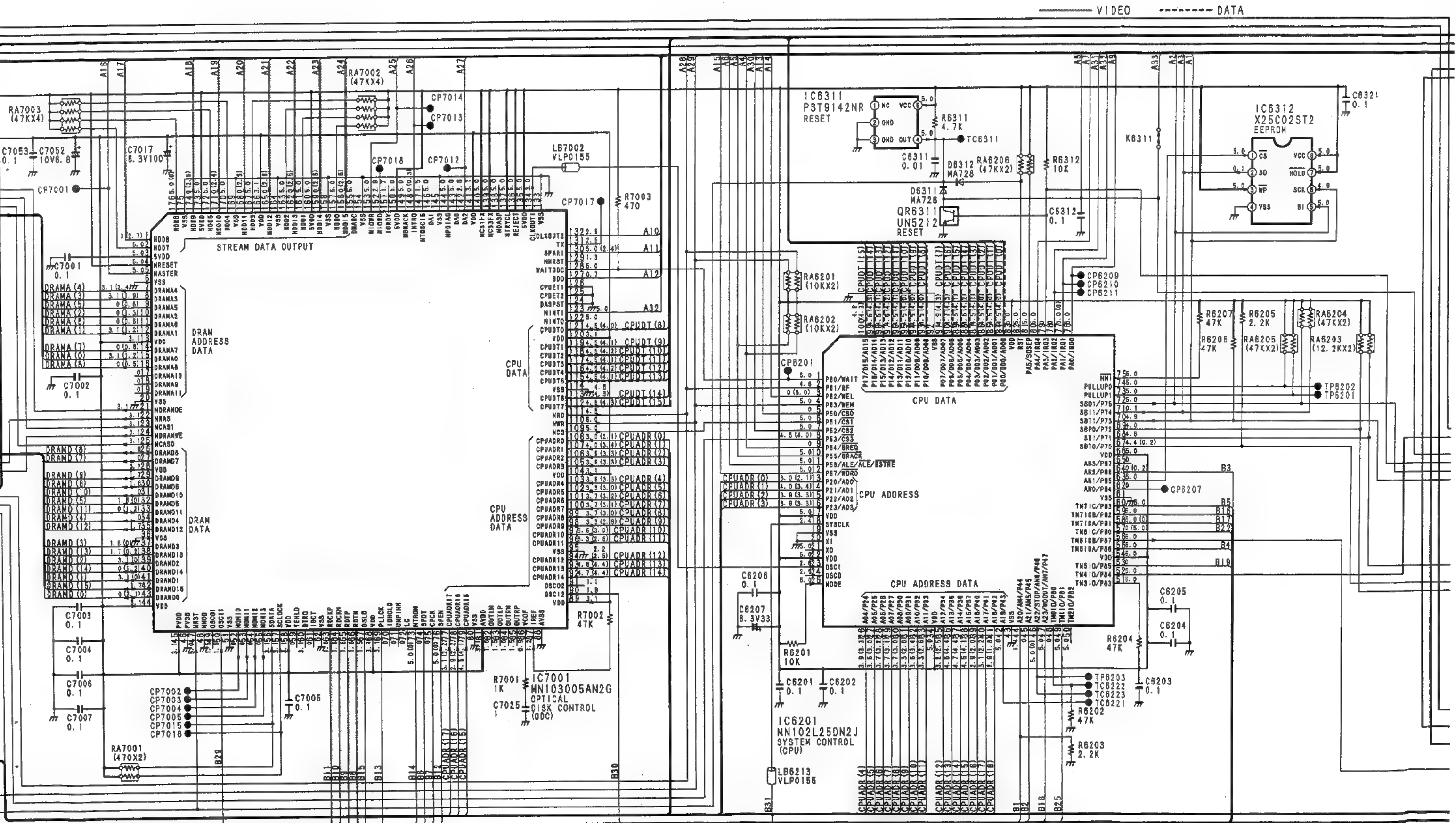
ADSC SECTION REF. NO. 22000 SERIES



## 2-7. ODC AND CPU SECTION (MAIN P.W.B. <2/5>) SCHEMATIC DIAGRAM

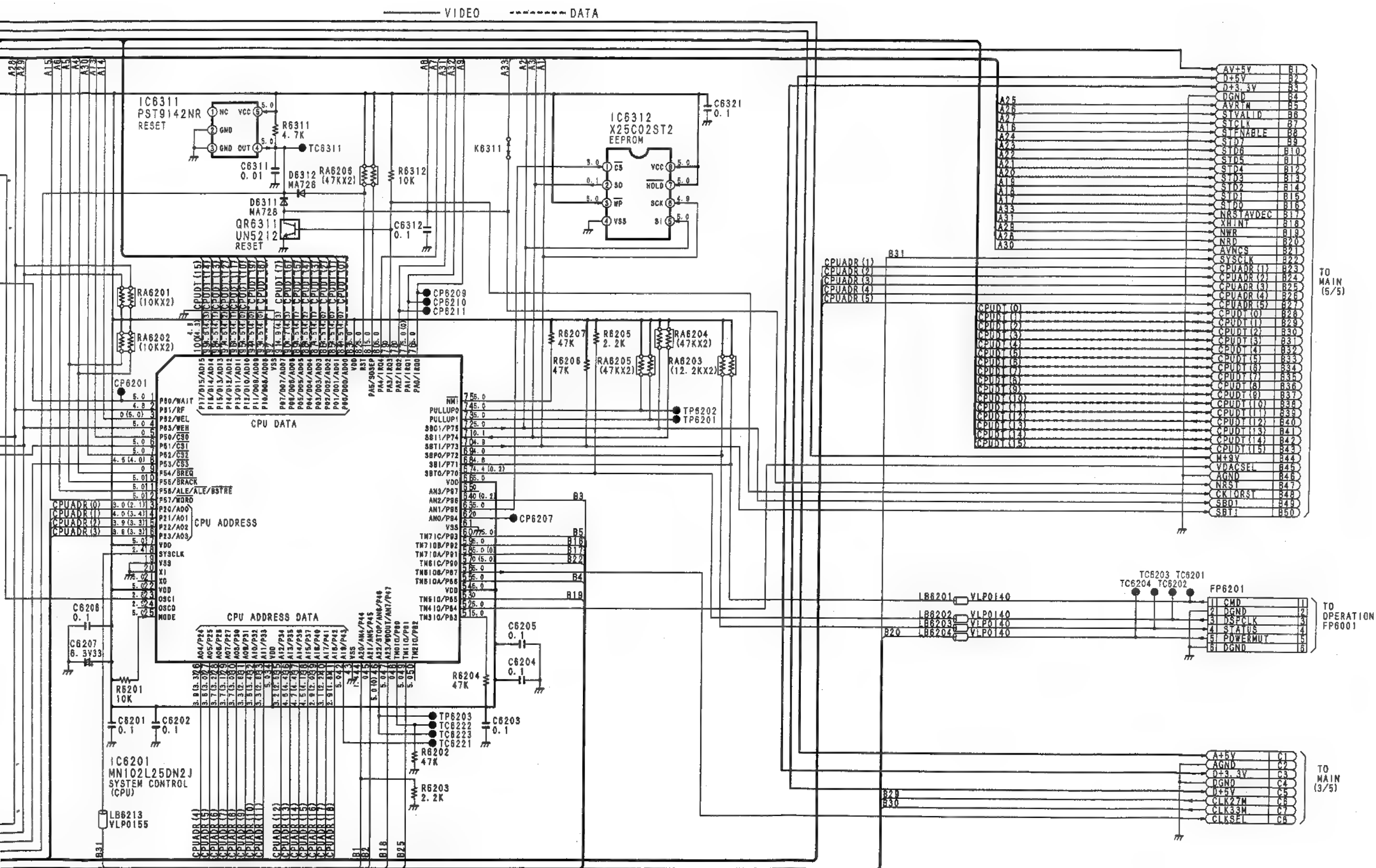






NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN  
 MAY BE SLIGHTLY DIFFERENT AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE  
 WITH DVD TEST DISC (TITLE 12) AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.



MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE  
DVD TEST DISC (TITLE 12) AND, THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

12 13 14 15 16 17 18 19 20 21

F

E

D

C

B

A

TO MAIN (5/5)

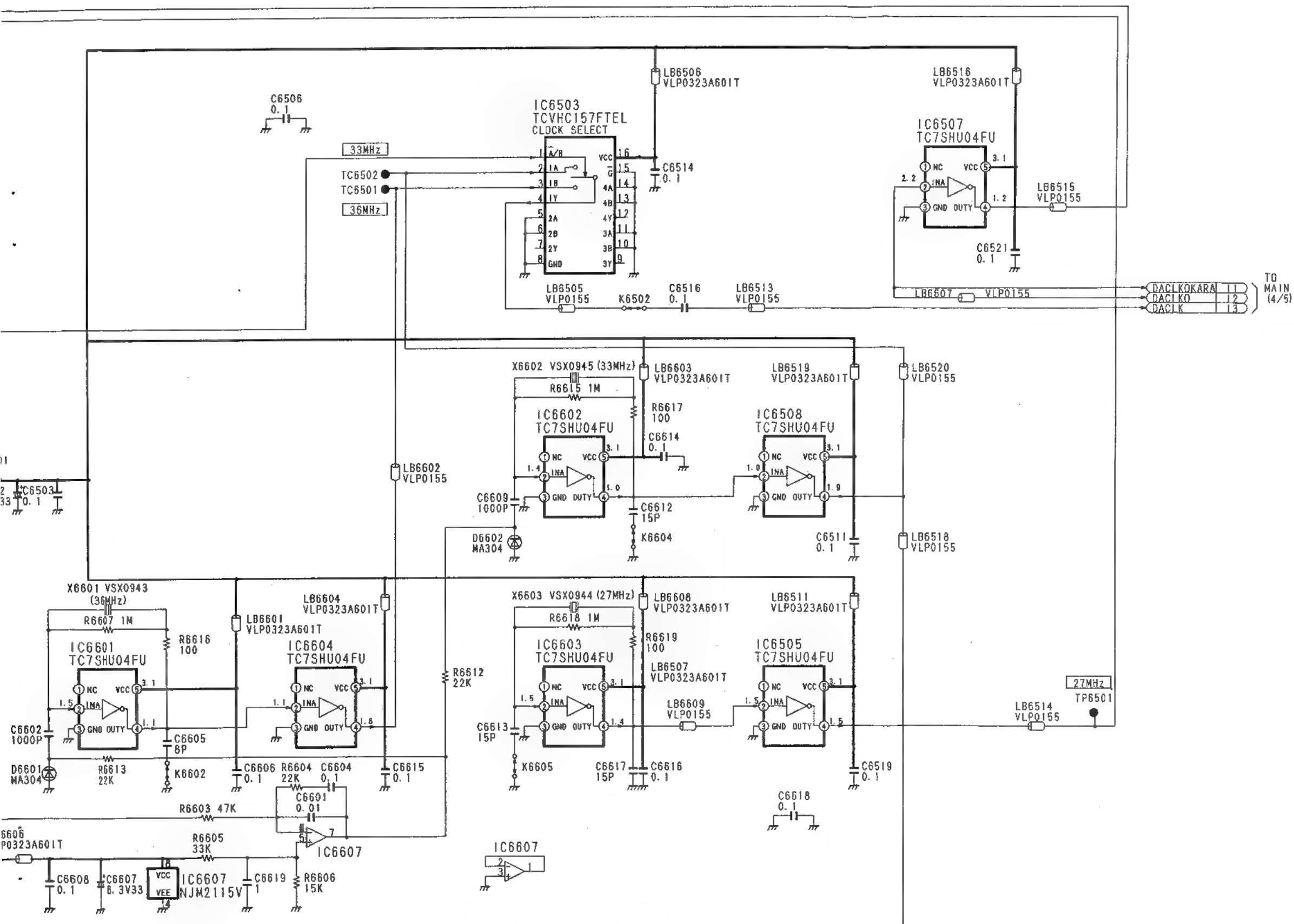
TO MAIN (2/5)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE WITH DVD TEST DISC (TITLE 12), AND THE DC VOLT

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE  
WITH DVD TEST DISC (TITLE 12), AND THE DC VOLT

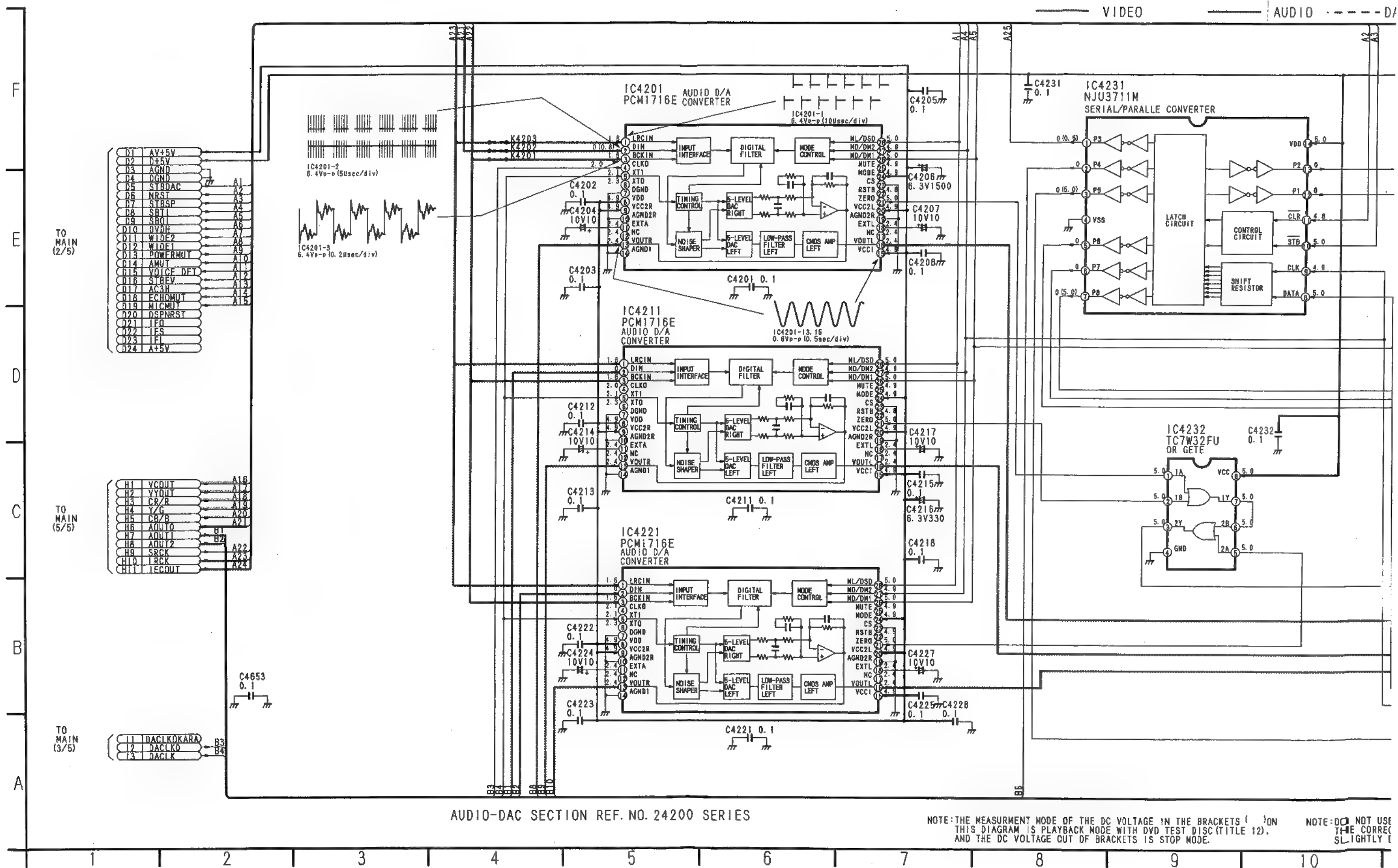
**IN P.W.B. <3/5> SCHEMATIC DIAGRAM**

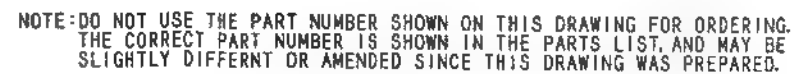


PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN  
1ST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) IN THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC (TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

## 2-9. AUDIO-DAC SECTION (MAIN P.W.B. <4/5>) SCHEMATIC DIAGRAM

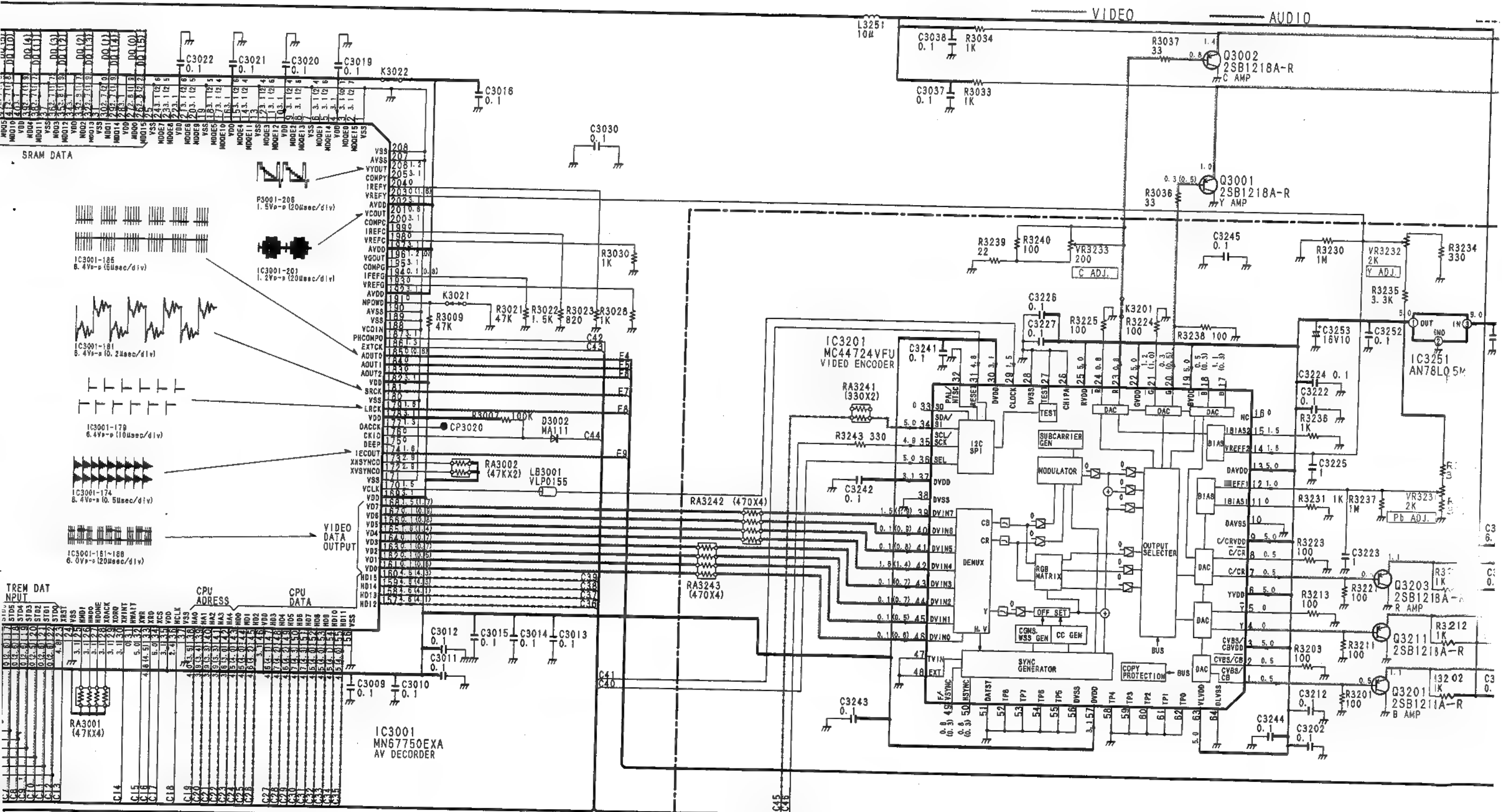






NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC (TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

A



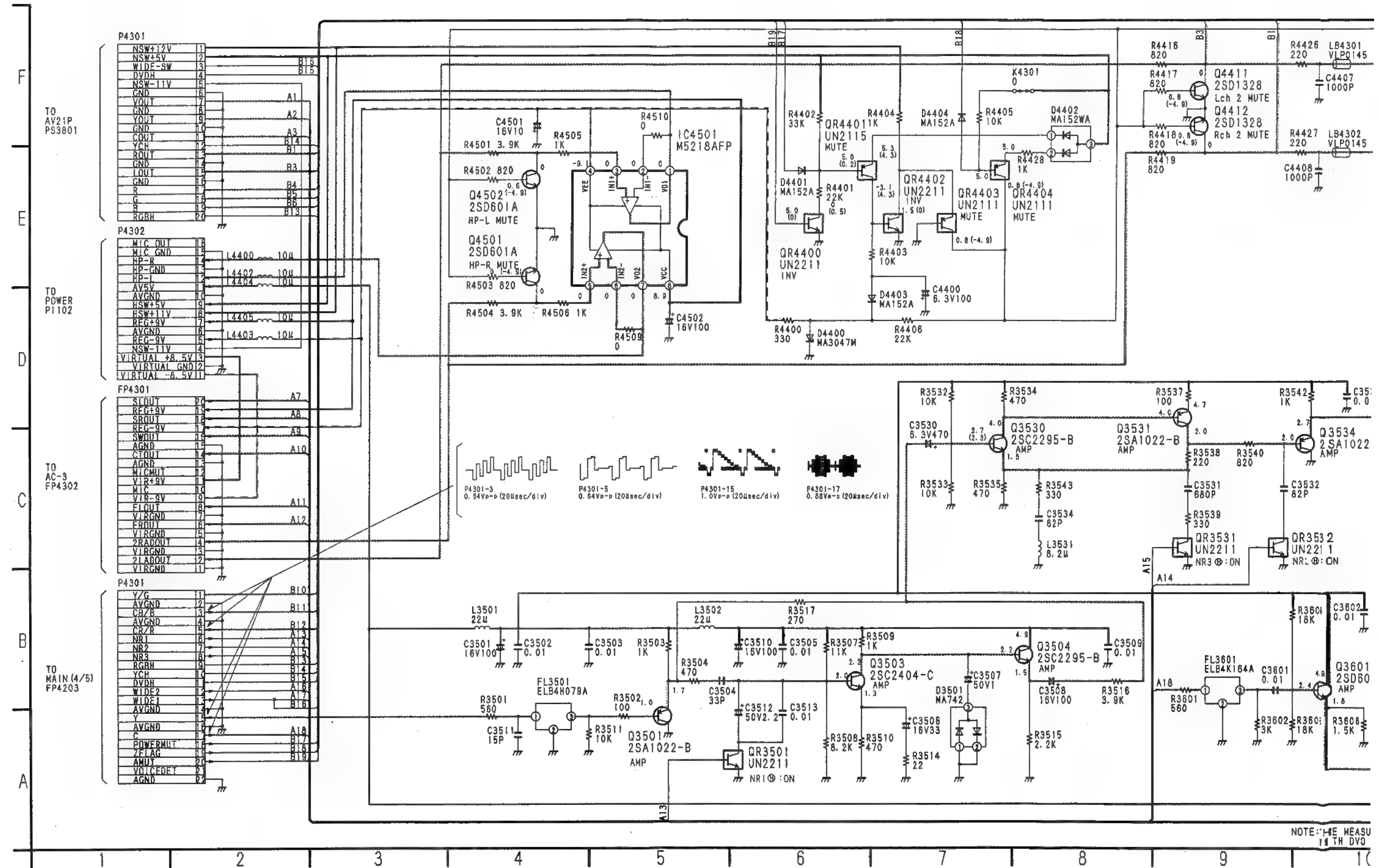
AV DECODER SECTION REF. NO. 23000 SERIES

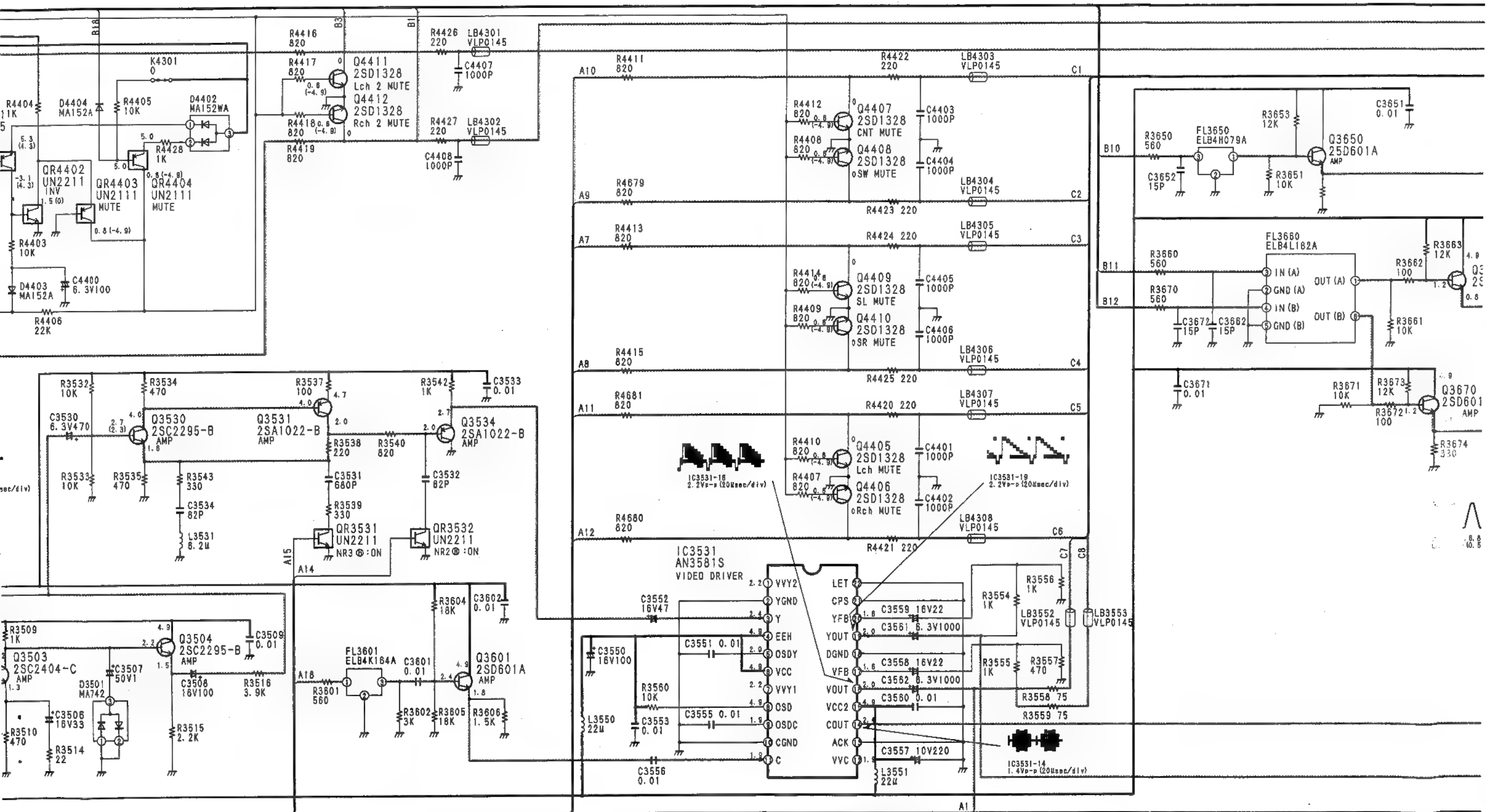
VIDEO DECODER SECTION REF. NO. 23000 SERIES





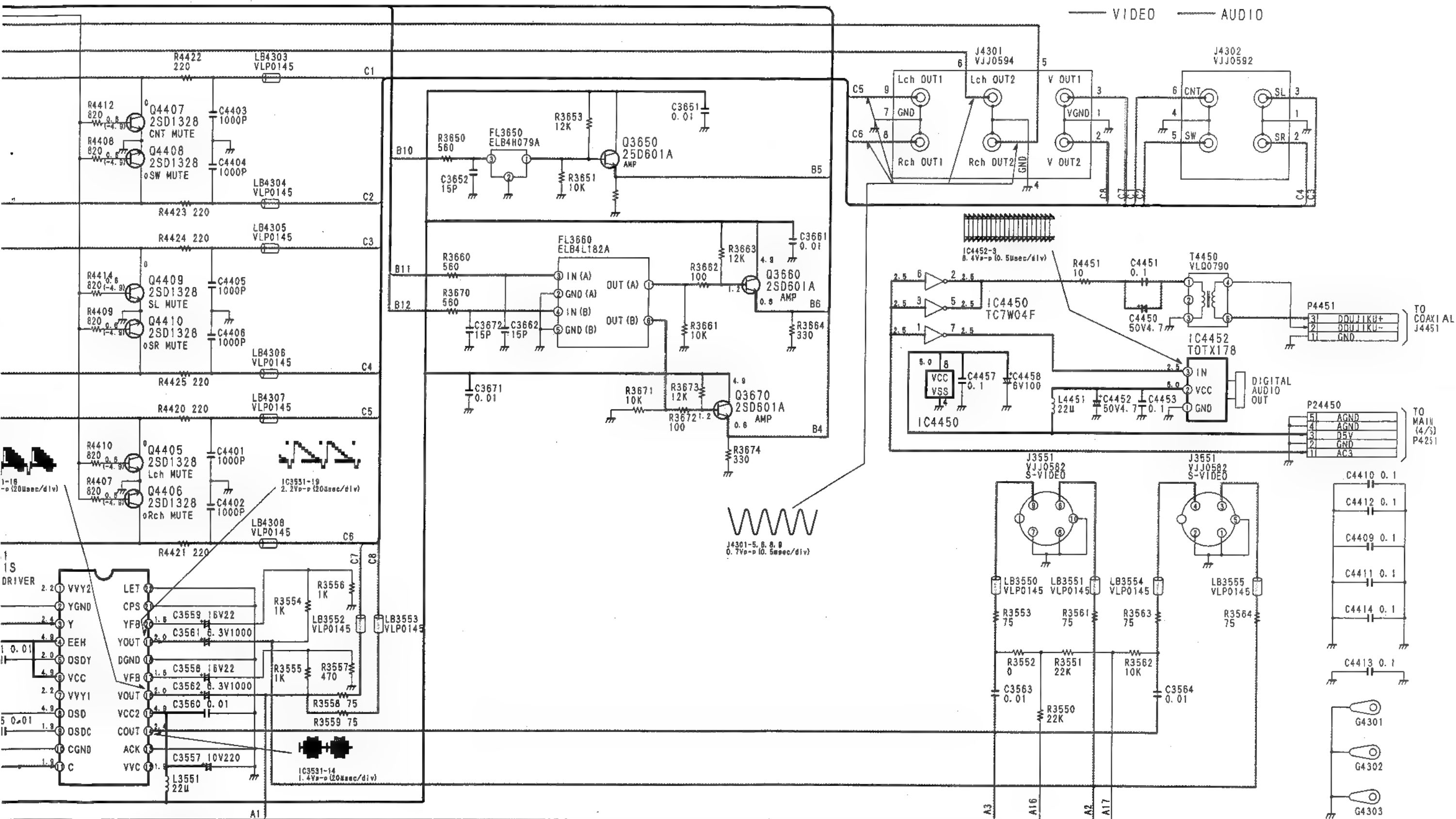
## 2-11. AV JACK SCHEMATIC DIAGRAM





NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC (TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORD IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OF AMENDE

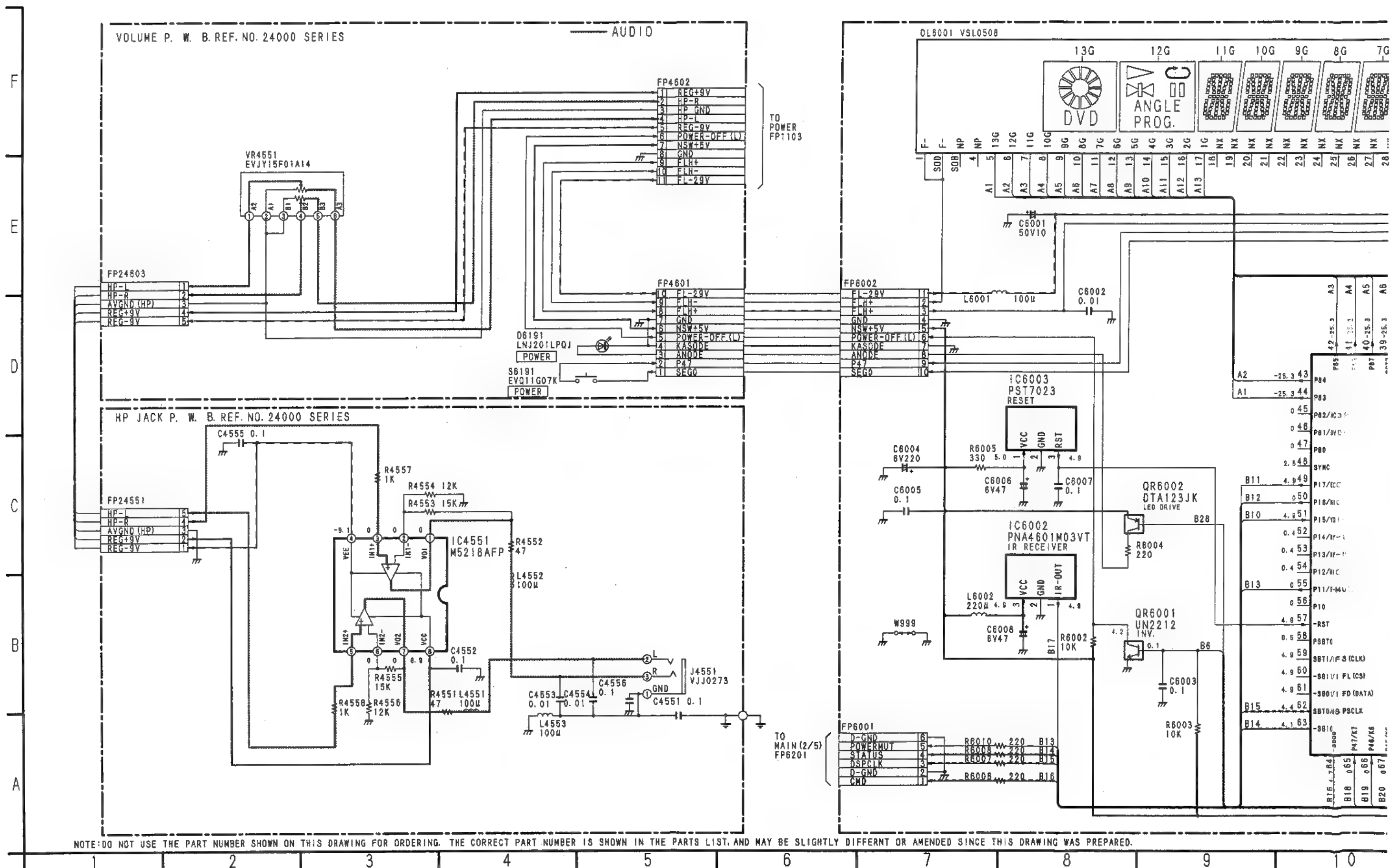


BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE  
AGE OUT OF BRACKETS IS STOP MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

REF. NO. 20000 SERIES

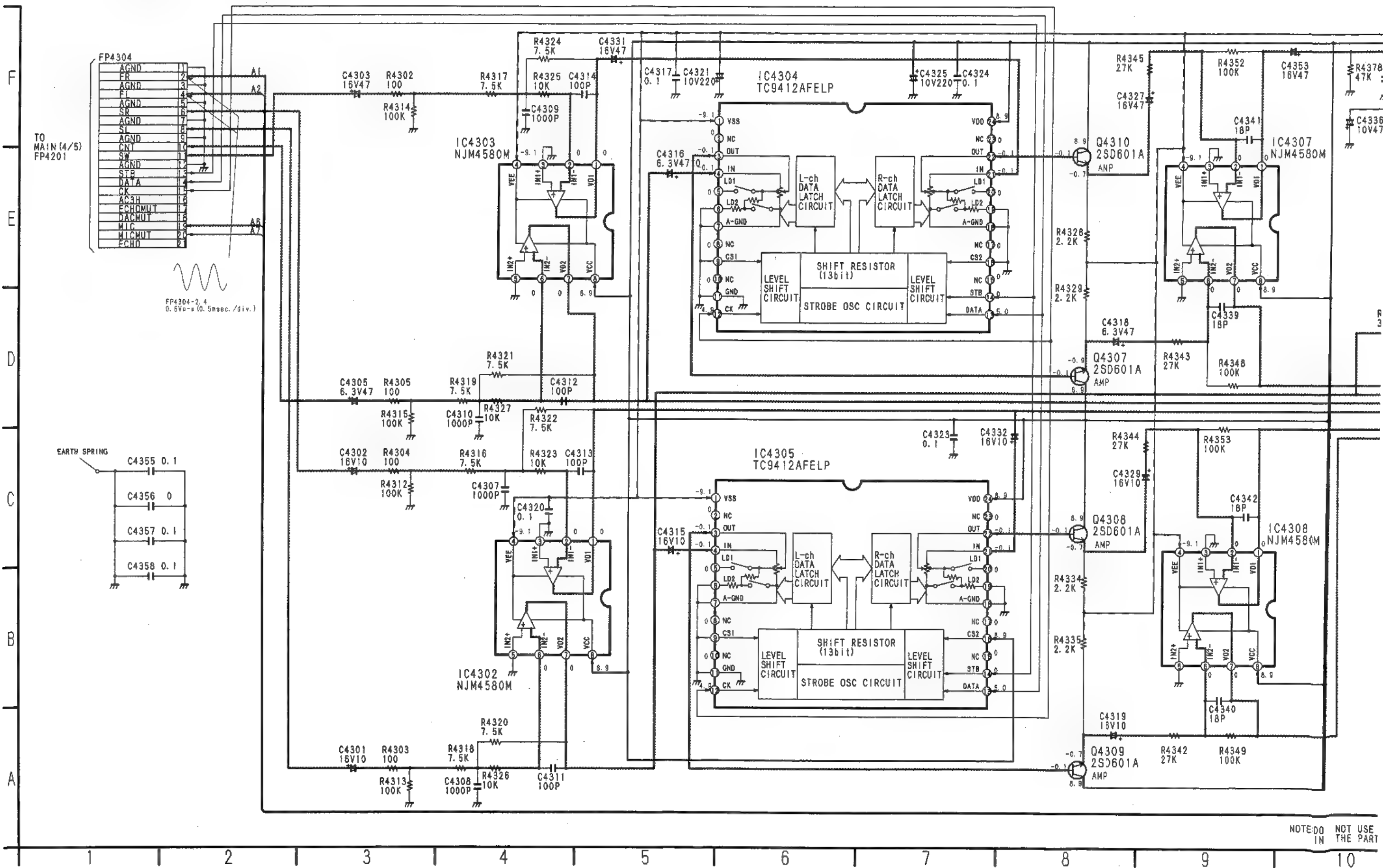
## 2-12. OPERATION, VOLUME, HP JACK AND COAXIAL SCHEMATIC DIAGRAM

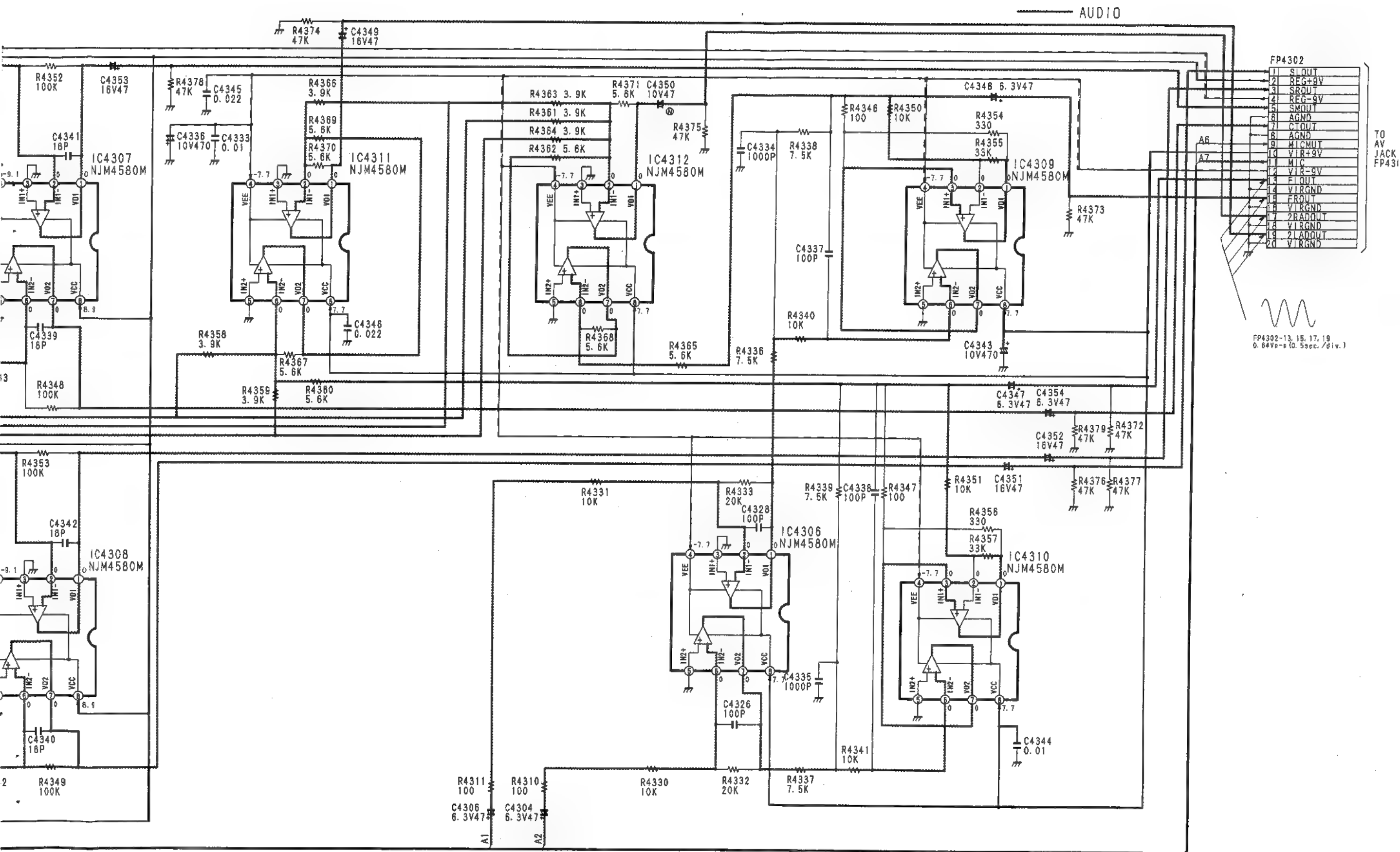






### 2-13. AC-3 SCHEMATIC DIAGRAM



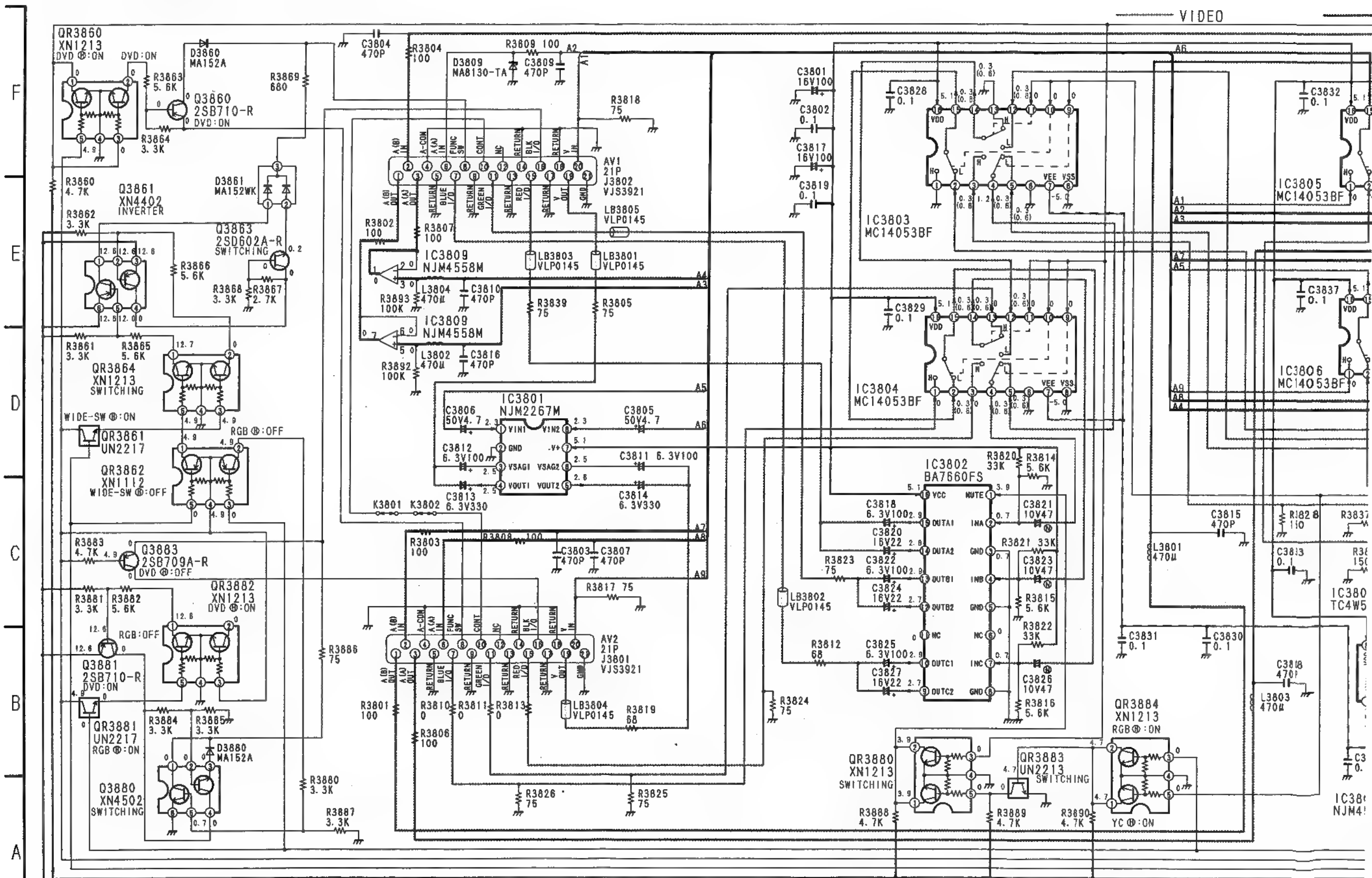


NOTE: DO NOT USE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE WITH DVD TEST DISC (TITLE 12) AND, THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.

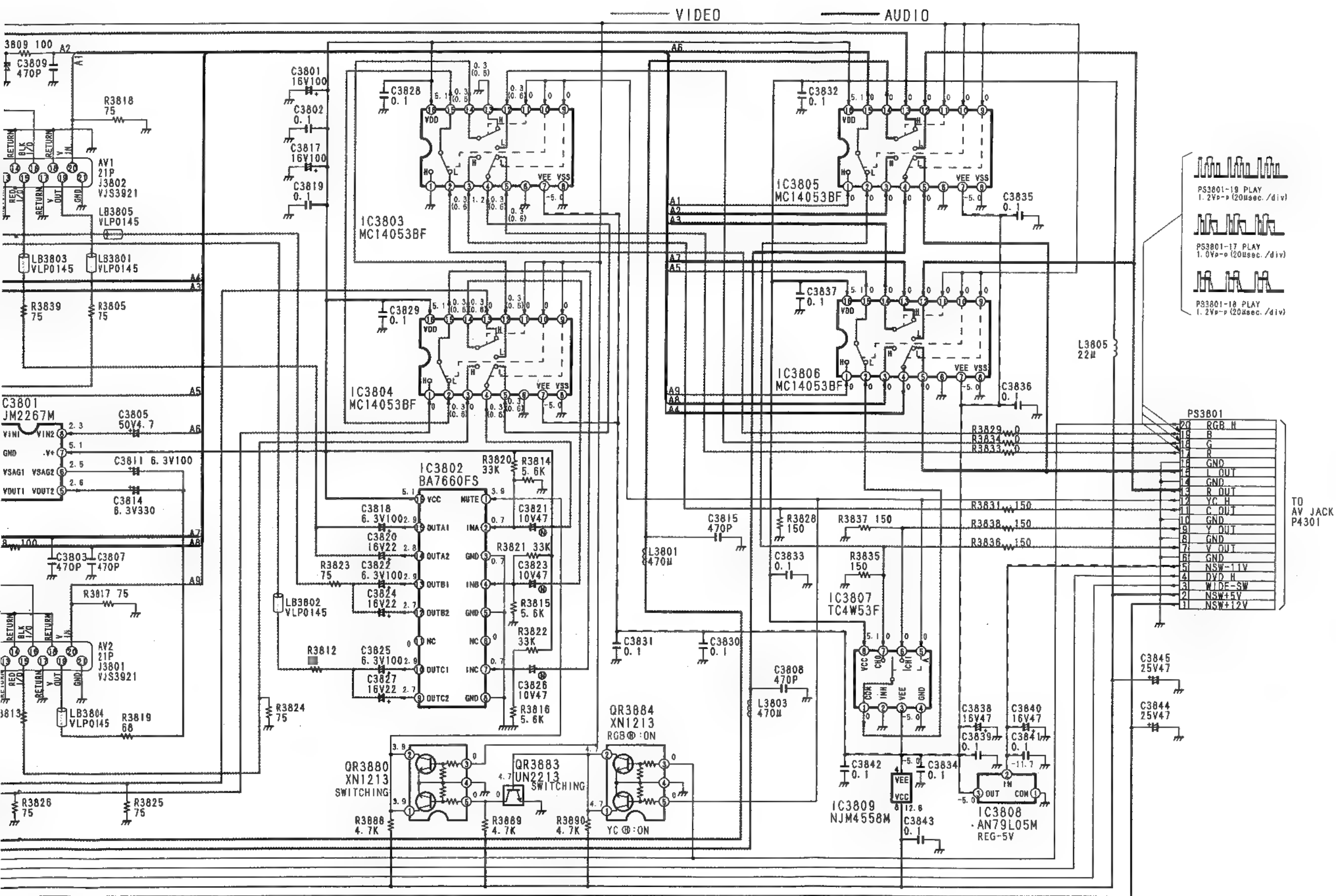


## 2-14. AV21P SCHEMATIC DIAGRAM



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK WITH DVD TEST DISC (TITLE 12), AND THE DC VOLTAGE OUT OF BRACKETS IS STOP MODE.



## F

F

## D

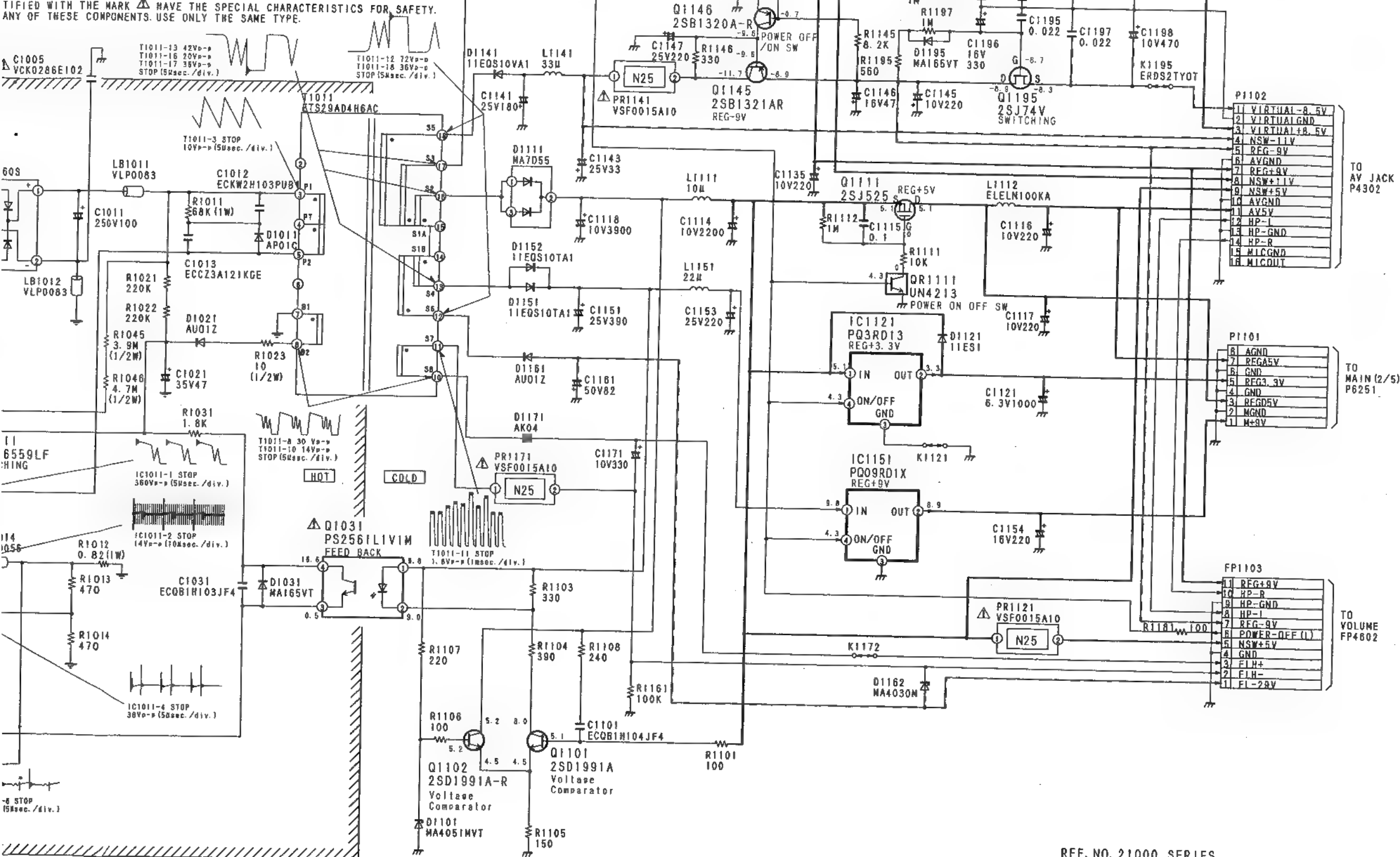
c

B



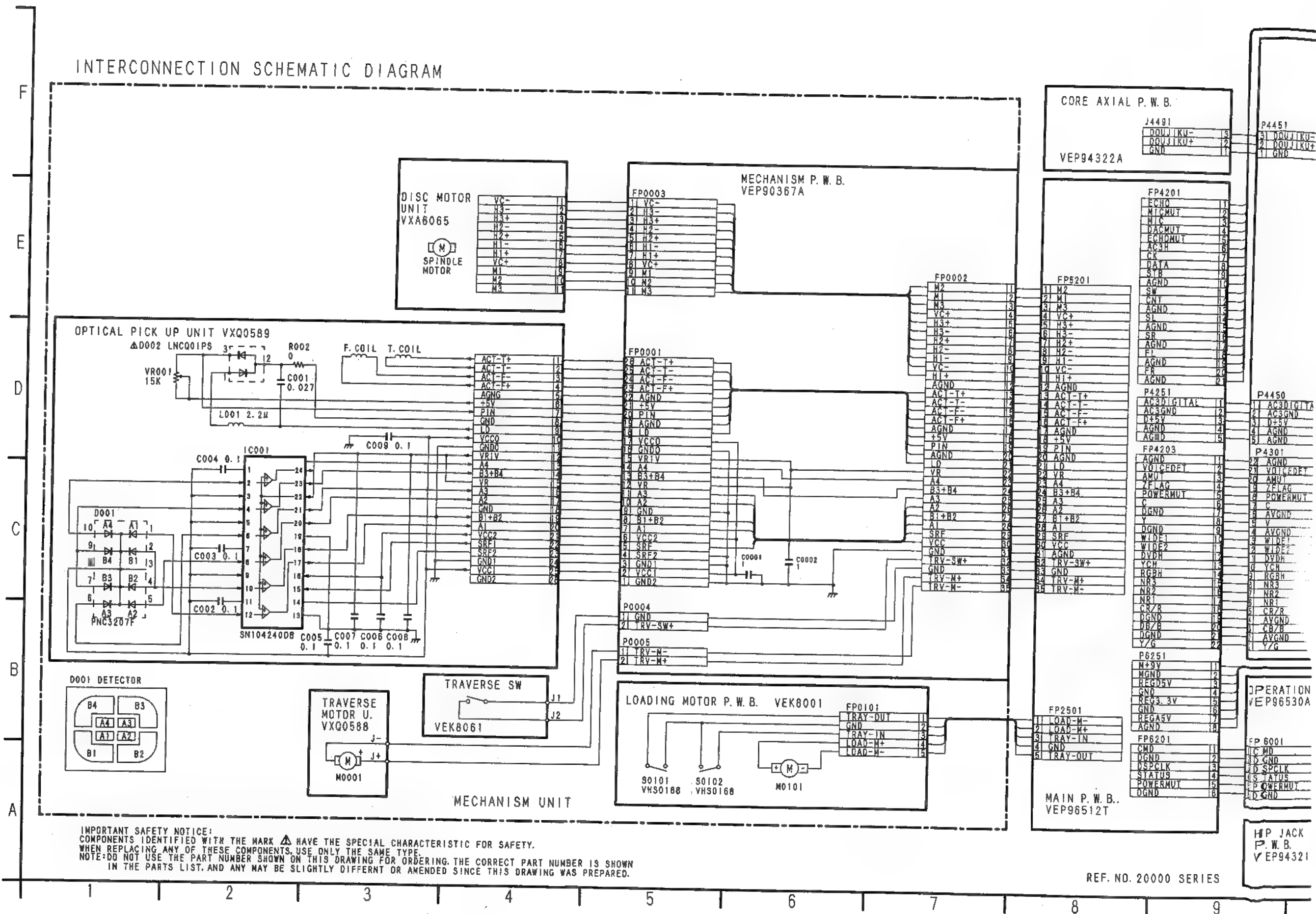
THE CORRECT PART NUMBER IS SHOWN  
THIS DRAWING WAS PREPARED.  
IS DIAGRAM IS PLAYBACK MODE  
IS STOP MODE.

Y NOTICE:  
IFIED WITH THE MARK  $\Delta$  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.  
ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.



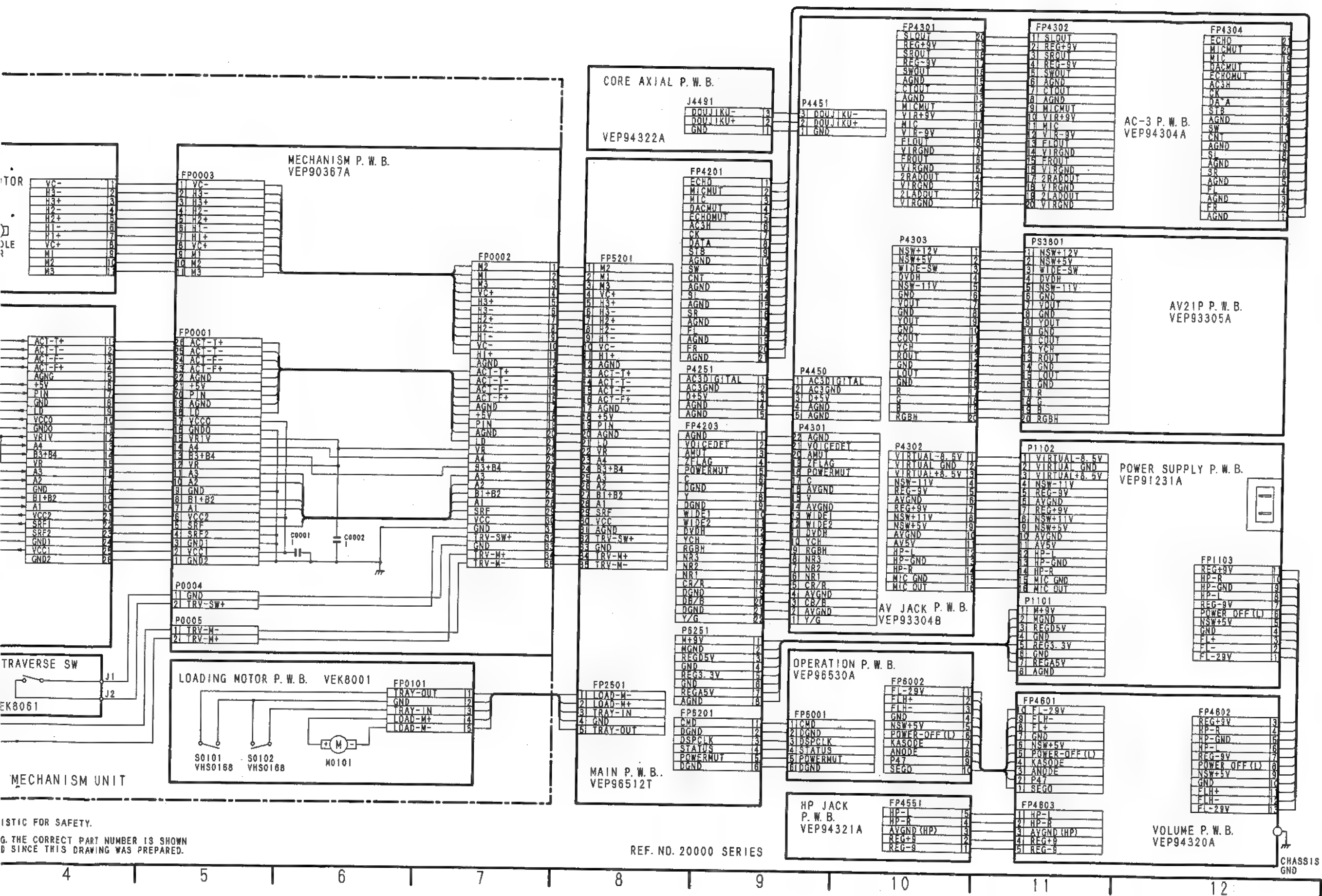
REF. NO. 21000 SERIES

## 2-16. INTERCONNECTION SCHEMATIC DIAGRAM



REF. NO. 20000 SERIES

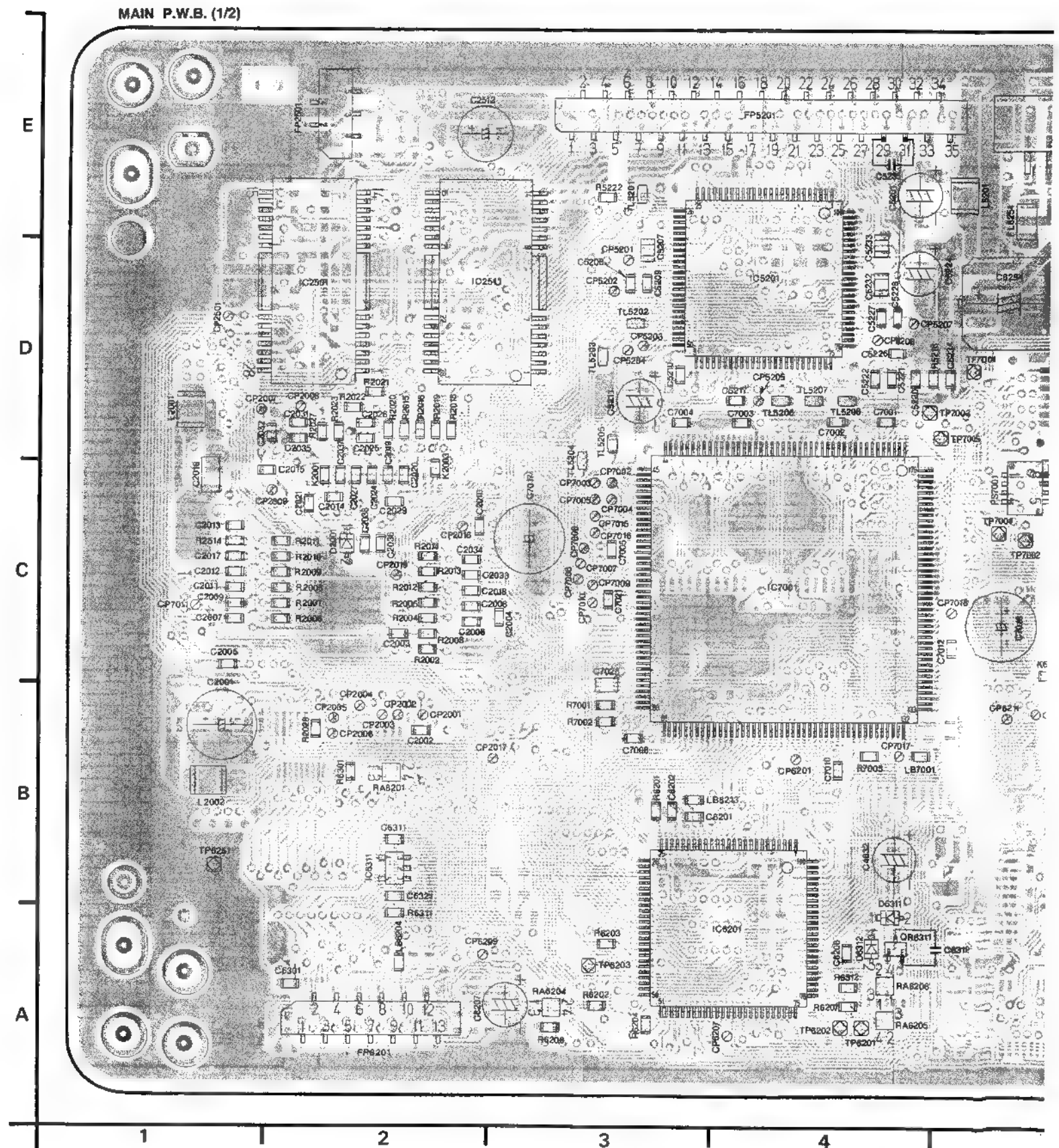




# 2-17. MAIN P.W.B.(VEP96512F)

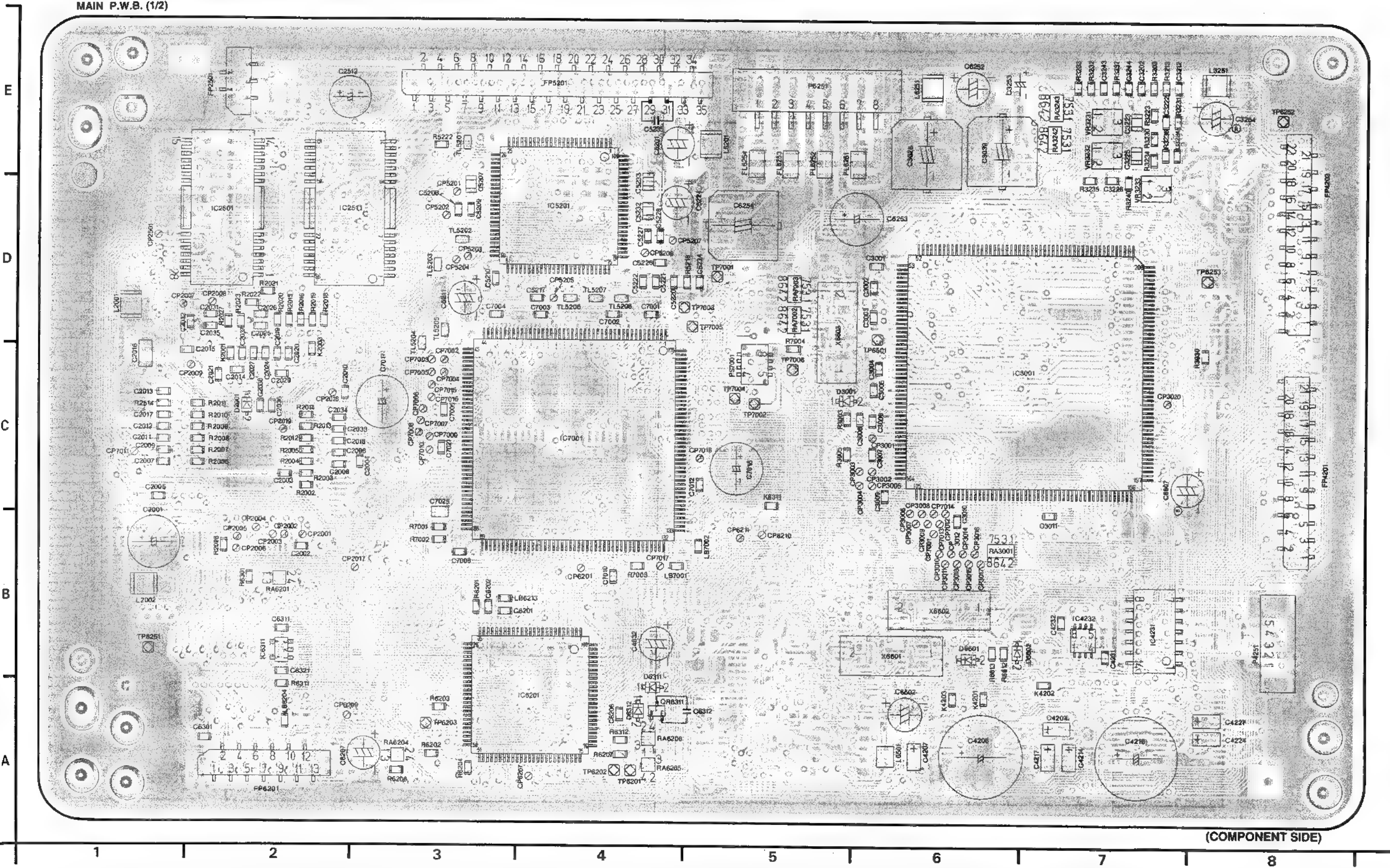
| MAIN P.W.B.                |      |   |        |      |   |                     |      |   |                          |     |   |
|----------------------------|------|---|--------|------|---|---------------------|------|---|--------------------------|-----|---|
| <b>Transistors</b>         |      |   | TC4256 | B-9  | Ⓢ | TC6256              | E-12 | Ⓢ | CP6201                   | B-4 | Ⓢ |
| Q3001                      | D-10 | Ⓢ | TC4257 | B-9  | Ⓢ | TC6257              | E-12 | Ⓢ | CP6207                   | A-4 | Ⓢ |
| Q3002                      | D-10 | Ⓢ | TC4258 | B-9  | Ⓢ | TC6258              | E-12 | Ⓢ | CP6209                   | A-2 | Ⓢ |
| Q3201                      | E-10 | Ⓢ | TC4259 | B-9  | Ⓢ | TC6261              | B-16 | Ⓢ | CP6210                   | C-5 | Ⓢ |
| Q3203                      | E-10 | Ⓢ | TC4260 | B-9  | Ⓢ | TC6262              | B-9  | Ⓢ | CP6211                   | C-5 | Ⓢ |
| Q3211                      | E-10 | Ⓢ | TC4261 | B-9  | Ⓢ | TC6263              | E-9  | Ⓢ | CP7001                   | B-6 | Ⓢ |
| Q5201                      | E-13 | Ⓢ | TC4262 | B-9  | Ⓢ | TC6264              | D-16 | Ⓢ | CP7002                   | C-3 | Ⓢ |
| <b>Transistor-Resistor</b> |      |   | TC4263 | B-9  | Ⓢ | TC6265              | E-11 | Ⓢ | CP7003                   | C-3 | Ⓢ |
| QR6311                     | A-4  | Ⓢ | TC4264 | B-9  | Ⓢ | TC6501              | A-12 | Ⓢ | CP7004                   | C-3 | Ⓢ |
| <b>Integrated Circuits</b> |      |   | TC4265 | B-9  | Ⓢ | TC6502              | B-12 | Ⓢ | CP7005                   | C-3 | Ⓢ |
| IC2001                     | C-15 | Ⓢ | TC4271 | D-9  | Ⓢ | TL5201              | E-3  | Ⓢ | CP7006                   | C-3 | Ⓢ |
| IC2501                     | D-2  | Ⓢ | TC4272 | C-9  | Ⓢ | TL5202              | D-3  | Ⓢ | CP7007                   | C-3 | Ⓢ |
| IC2511                     | D-2  | Ⓢ | TC4273 | D-9  | Ⓢ | TL5203              | D-3  | Ⓢ | CP7008                   | C-3 | Ⓢ |
| IC3001                     | C-6  | Ⓢ | TC4274 | D-9  | Ⓢ | TL5204              | C-3  | Ⓢ | CP7009                   | C-3 | Ⓢ |
| IC3051                     | D-11 | Ⓢ | TC4275 | D-9  | Ⓢ | TL5205              | D-3  | Ⓢ | CP7010                   | C-3 | Ⓢ |
| IC3061                     | D-10 | Ⓢ | TC4276 | D-9  | Ⓢ | TL5206              | D-4  | Ⓢ | CP7011                   | C-1 | Ⓢ |
| IC3201                     | E-10 | Ⓢ | TC4277 | D-9  | Ⓢ | TL5207              | D-4  | Ⓢ | CP7012                   | B-6 | Ⓢ |
| IC3251                     | E-11 | Ⓢ | TC4278 | D-9  | Ⓢ | TL5208              | D-4  | Ⓢ | CP7013                   | B-6 | Ⓢ |
| IC4201                     | A-11 | Ⓢ | TC4279 | D-9  | Ⓢ | TP6201              | A-4  | Ⓢ | CP7014                   | B-6 | Ⓢ |
| IC4211                     | A-10 | Ⓢ | TC4280 | D-9  | Ⓢ | TP6202              | A-4  | Ⓢ | CP7015                   | C-3 | Ⓢ |
| IC4221                     | A-10 | Ⓢ | TC4281 | D-9  | Ⓢ | TP6203              | A-3  | Ⓢ | CP7016                   | C-3 | Ⓢ |
| IC4231                     | B-7  | Ⓢ | TC4282 | D-9  | Ⓢ | TP6251              | B-1  | Ⓢ | <b>Diodes</b>            |     |   |
| IC4232                     | B-7  | Ⓢ | TC4283 | D-9  | Ⓢ | TP6252              | E-8  | Ⓢ | D2001                    | C-2 | Ⓢ |
| IC4241                     | B-10 | Ⓢ | TC4284 | D-9  | Ⓢ | TP6253              | D-8  | Ⓢ | D3001                    | C-5 | Ⓢ |
| IC5201                     | D-4  | Ⓢ | TC4285 | E-9  | Ⓢ | TP6501              | C-6  | Ⓢ | D6311                    | A-4 | Ⓢ |
| IC6201                     | A-4  | Ⓢ | TC4286 | E-9  | Ⓢ | TP7001              | D-5  | Ⓢ | D6312                    | A-4 | Ⓢ |
| IC6301                     | B-15 | Ⓢ | TC4287 | E-9  | Ⓢ | TP7002              | C-5  | Ⓢ | D6601                    | B-6 | Ⓢ |
| IC6311                     | B-2  | Ⓢ | TC4288 | B-9  | Ⓢ | TP7004              | C-5  | Ⓢ | D6602                    | B-6 | Ⓢ |
| IC6312                     | A-14 | Ⓢ | TC5201 | E-13 | Ⓢ | TP7006              | C-5  | Ⓢ | <b>Adjustments</b>       |     |   |
| IC6503                     | B-12 | Ⓢ | TC5202 | E-13 | Ⓢ | <b>Filters</b>      |      |   | FL6251                   | E-5 | Ⓢ |
| IC6505                     | C-12 | Ⓢ | TC5203 | E-13 | Ⓢ | VR3231              | E-7  | Ⓢ | FL6252                   | D-5 | Ⓢ |
| IC6507                     | B-11 | Ⓢ | TC5204 | E-13 | Ⓢ | VR3232              | D-7  | Ⓢ | FL6253                   | D-5 | Ⓢ |
| IC6508                     | B-11 | Ⓢ | TC5205 | E-13 | Ⓢ | VR3233              | D-7  | Ⓢ | FL6254                   | D-5 | Ⓢ |
| IC6601                     | A-12 | Ⓢ | TC5206 | E-13 | Ⓢ | <b>Connectors</b>   |      |   | <b>X'tal Oscillators</b> |     |   |
| IC6602                     | B-11 | Ⓢ | TC5207 | E-13 | Ⓢ | FP2501              | E-2  | Ⓢ | X6601                    | C-5 | Ⓢ |
| IC6603                     | D-12 | Ⓢ | TC5208 | E-13 | Ⓢ | FP4201              | B-8  | Ⓢ | X6602                    | B-6 | Ⓢ |
| IC6604                     | A-12 | Ⓢ | TC5209 | E-13 | Ⓢ | FP4203              | D-8  | Ⓢ | X6603                    | C-5 | Ⓢ |
| IC6607                     | C-10 | Ⓢ | TC5210 | E-13 | Ⓢ | FP5201              | E-4  | Ⓢ | <b>Check Points</b>      |     |   |
| IC7001                     | C-4  | Ⓢ | TC5211 | E-13 | Ⓢ | FP6201              | A-2  | Ⓢ | CP2001                   | B-2 | Ⓢ |
| IC7051                     | C-14 | Ⓢ | TC5212 | E-13 | Ⓢ | P4251               | B-8  | Ⓢ | CP2002                   | B-2 | Ⓢ |
| <b>Test Points</b>         |      |   | TC5215 | E-14 | Ⓢ | P6251               | E-5  | Ⓢ | CP2003                   | B-2 | Ⓢ |
| TC2001                     | B-16 | Ⓢ | TC5216 | E-14 | Ⓢ | <b>Check Points</b> |      |   | CP2004                   | B-2 | Ⓢ |
| TC2002                     | B-16 | Ⓢ | TC5217 | E-14 | Ⓢ | CP2005              | B-2  | Ⓢ | CP2005                   | B-2 | Ⓢ |
| TC2003                     | B-16 | Ⓢ | TC5218 | E-14 | Ⓢ | CP2006              | B-2  | Ⓢ | CP2006                   | B-2 | Ⓢ |
| TC2005                     | C-15 | Ⓢ | TC5219 | E-14 | Ⓢ | CP2007              | D-1  | Ⓢ | CP2007                   | D-1 | Ⓢ |
| TC2006                     | C-15 | Ⓢ | TC5220 | E-14 | Ⓢ | CP2008              | D-1  | Ⓢ | CP2008                   | D-1 | Ⓢ |
| TC2007                     | C-15 | Ⓢ | TC5221 | E-14 | Ⓢ | CP2009              | C-1  | Ⓢ | CP2009                   | C-1 | Ⓢ |
| TC2008                     | C-15 | Ⓢ | TC5222 | E-14 | Ⓢ | CP2016              | C-2  | Ⓢ | CP2016                   | C-2 | Ⓢ |
| TC2009                     | C-15 | Ⓢ | TC5223 | E-14 | Ⓢ | CP2017              | B-3  | Ⓢ | CP2017                   | B-3 | Ⓢ |
| TC2010                     | B-16 | Ⓢ | TC5224 | E-14 | Ⓢ | CP2019              | C-2  | Ⓢ | CP2019                   | C-2 | Ⓢ |
| TC2011                     | B-16 | Ⓢ | TC5225 | E-14 | Ⓢ | CP2501              | D-1  | Ⓢ | CP2501                   | D-1 | Ⓢ |
| TC2012                     | B-16 | Ⓢ | TC5226 | D-15 | Ⓢ | CP3001              | C-6  | Ⓢ | CP3001                   | C-6 | Ⓢ |
| TC2013                     | B-18 | Ⓢ | TC5227 | E-15 | Ⓢ | CP3002              | C-6  | Ⓢ | CP3002                   | C-6 | Ⓢ |
| TC2014                     | C-15 | Ⓢ | TC5228 | E-15 | Ⓢ | CP3003              | C-6  | Ⓢ | CP3003                   | C-6 | Ⓢ |
| TC2015                     | C-15 | Ⓢ | TC5229 | E-15 | Ⓢ | CP3004              | C-6  | Ⓢ | CP3004                   | C-6 | Ⓢ |
| TC2016                     | C-15 | Ⓢ | TC5230 | E-13 | Ⓢ | CP3005              | C-6  | Ⓢ | CP3005                   | C-6 | Ⓢ |
| TC2017                     | C-15 | Ⓢ | TC5231 | D-14 | Ⓢ | CP3006              | B-6  | Ⓢ | CP3006                   | B-6 | Ⓢ |
| TC2018                     | D-16 | Ⓢ | TC5232 | D-14 | Ⓢ | CP3007              | B-6  | Ⓢ | CP3007                   | B-6 | Ⓢ |
| TC2019                     | C-15 | Ⓢ | TC5233 | D-14 | Ⓢ | CP3008              | B-6  | Ⓢ | CP3008                   | B-6 | Ⓢ |
| TC2020                     | C-15 | Ⓢ | TC5234 | D-13 | Ⓢ | CP3009              | B-6  | Ⓢ | CP3009                   | B-6 | Ⓢ |
| TC2021                     | D-15 | Ⓢ | TC5235 | D-14 | Ⓢ | CP3010              | B-6  | Ⓢ | CP3010                   | B-6 | Ⓢ |
| TC2022                     | D-15 | Ⓢ | TC5236 | D-13 | Ⓢ | CP3011              | B-6  | Ⓢ | CP3011                   | B-6 | Ⓢ |
| TC2023                     | D-16 | Ⓢ | TC6201 | A-16 | Ⓢ | CP3012              | B-6  | Ⓢ | CP3012                   | B-6 | Ⓢ |
| TC2024                     | D-15 | Ⓢ | TC6202 | A-15 | Ⓢ | CP3013              | B-6  | Ⓢ | CP3013                   | B-6 | Ⓢ |
| TC2025                     | D-15 | Ⓢ | TC6203 | A-15 | Ⓢ | CP3014              | B-6  | Ⓢ | CP3014                   | B-6 | Ⓢ |
| TC2026                     | C-15 | Ⓢ | TC6204 | A-15 | Ⓢ | CP3015              | B-6  | Ⓢ | CP3015                   | B-6 | Ⓢ |
| TC2027                     | D-16 | Ⓢ | TC6205 | A-15 | Ⓢ | CP3016              | B-6  | Ⓢ | CP3016                   | B-6 | Ⓢ |
| TC2028                     | C-15 | Ⓢ | TC6206 | A-15 | Ⓢ | CP3017              | B-6  | Ⓢ | CP3017                   | B-6 | Ⓢ |
| TC2501                     | E-15 | Ⓢ | TC6207 | A-15 | Ⓢ | CP3020              | C-7  | Ⓢ | CP3020                   | C-7 | Ⓢ |
| TC2502                     | E-15 | Ⓢ | TC6208 | A-15 | Ⓢ | CP5201              | D-3  | Ⓢ | CP5201                   | D-3 | Ⓢ |
| TC2503                     | E-15 | Ⓢ | TC6209 | A-15 | Ⓢ | CP5202              | D-3  | Ⓢ | CP5202                   | D-3 | Ⓢ |
| TC2504                     | E-15 | Ⓢ | TC6210 | A-15 | Ⓢ | CP5203              | D-3  | Ⓢ | CP5203                   | D-3 | Ⓢ |
| TC2511                     | D-16 | Ⓢ | TC6211 | A-15 | Ⓢ | CP5204              | D-3  | Ⓢ | CP5204                   | D-3 | Ⓢ |
| TC2512                     | D-15 | Ⓢ | TC6221 | A-14 | Ⓢ | CP5205              | D-4  | Ⓢ | CP5205                   | D-4 | Ⓢ |
| TC4251                     | B-9  | Ⓢ | TC6222 | A-14 | Ⓢ | CP5206              | D-4  | Ⓢ | CP5206                   | D-4 | Ⓢ |
| TC4252                     | B-9  | Ⓢ | TC6223 | A-14 | Ⓢ | CP5207              | D-4  | Ⓢ | CP5207                   | D-4 | Ⓢ |
| TC4253                     | B-9  | Ⓢ | TC6251 | E-12 | Ⓢ |                     |      |   |                          |     |   |
| TC4254                     | B-9  | Ⓢ | TC6252 | E-12 | Ⓢ |                     |      |   |                          |     |   |
| TC4255                     | B-9  | Ⓢ | TC6253 | E-12 | Ⓢ |                     |      |   |                          |     |   |
|                            |      |   | TC6254 | E-12 | Ⓢ |                     |      |   |                          |     |   |
|                            |      |   | TC6255 | E-12 | Ⓢ |                     |      |   |                          |     |   |

ADDRESS INFORMATION  
 Ⓢ... COMPONENT SIDE  
 Ⓢ... FOIL SIDE





2-17. MAIN P.W.B.(VEP96512F)









## 2-18. POWER SUPPLY P.W.B.(VEP91231A)

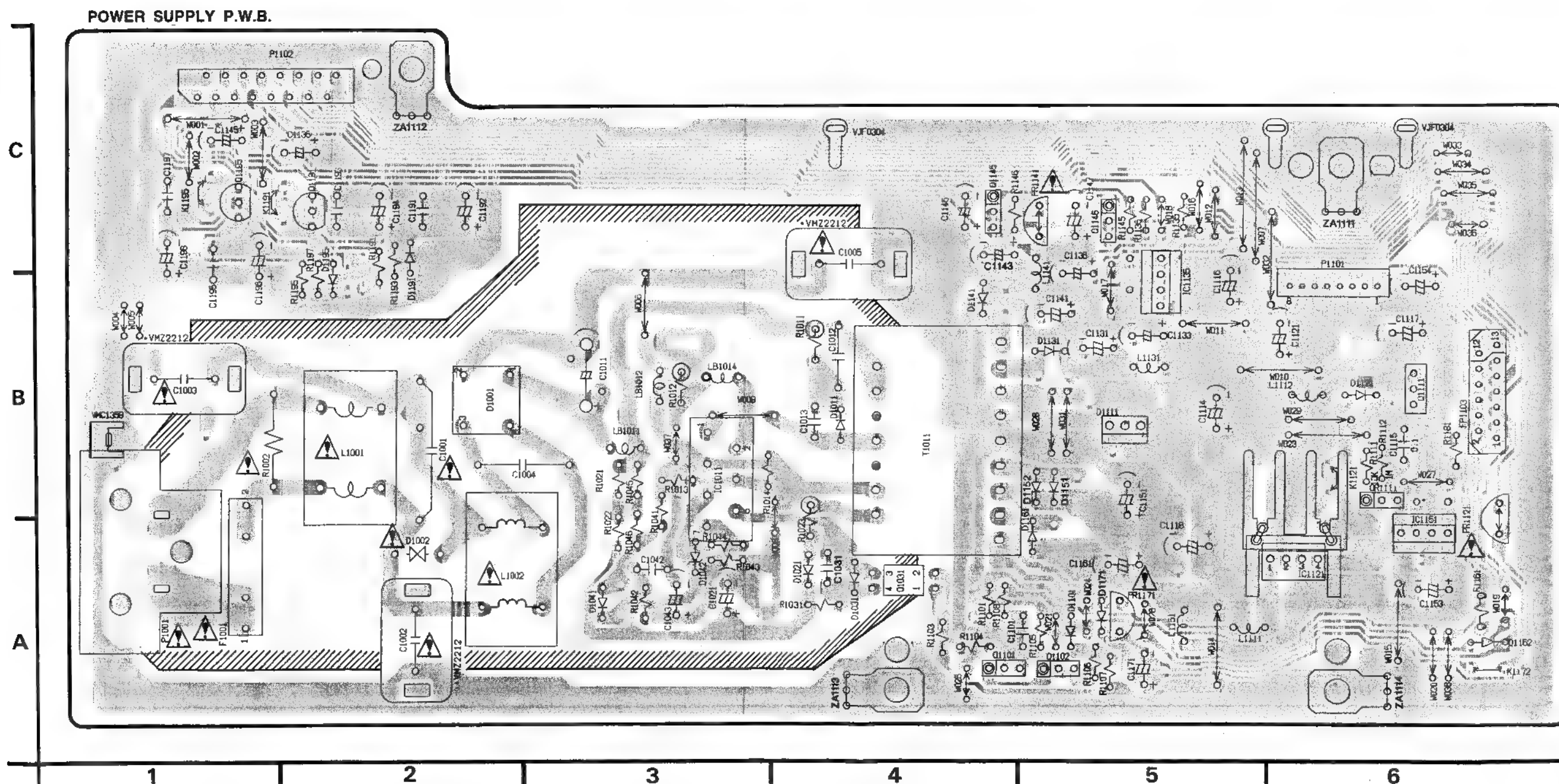
**CAUTION**

THE RED MARK INDICATES THE PRIMARY  
CIRCUIT TO DISTINGUISH THE PRIMARY  
FROM THE SECONDARY CIRCUIT.  
PAY ATTENTION NOT TO RECEIVE AN  
ELECTRIC SHOCK DURING REPAIR AND  
SERVICE OF THE PRODUCTS.

1. Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.
2.  High voltage is applied here. Pay extreme attention, when replacing.
3. When servicing, remove the power cord from the power outlet.
4. When replacing any components, confirm the correct part number with the parts list.

| POWER SUPPLY P.W.B.        |     |               |     |                    |     |
|----------------------------|-----|---------------|-----|--------------------|-----|
| <b>Transistors</b>         |     | P1101         | C-6 | D1171              | A-5 |
| Q1031                      | A-4 | P1102         | C-1 | D1191              | B-2 |
| Q1101                      | A-4 | FP1103        | B-6 | D1195              | C-2 |
| Q1102                      | A-5 | <b>Diodes</b> |     | <b>Fuse</b>        |     |
| Q1111                      | B-6 | D1001         | B-2 | F1001              | A-1 |
| Q1145                      | C-4 | D1002         | A-2 | <b>Protectors</b>  |     |
| Q1146                      | C-5 | D1011         | B-4 | PR1121             | B-6 |
| Q1191                      | C-2 | D1021         | A-4 | PR1141             | C-5 |
| Q1195                      | C-1 | D1031         | A-4 | PR1171             | A-5 |
| <b>Transistor-Resistor</b> |     | Q1041         | A-3 | <b>Transformer</b> |     |
| QR1111                     | B-6 | D1042         | A-3 | T1011              | B-4 |
| <b>Integrated Circuits</b> |     | D1101         | A-5 |                    |     |
| IC1011                     | B-3 | D1111         | B-5 |                    |     |
| IC1121                     | A-6 | D1121         | B-6 |                    |     |
| IC1135                     | B-5 | D1131         | B-6 |                    |     |
| IC1151                     | B-6 | D1141         | B-4 |                    |     |
| <b>Connectors</b>          |     | D1151         | B-5 |                    |     |
| P1001                      | A-1 | D1152         | B-5 |                    |     |
|                            |     | D1161         | B-5 |                    |     |
|                            |     | D1162         | A-6 |                    |     |

### ADDRESS INFORMATION



**2-19. OPERATION P.W.B.(VEP96530A), VOLUME P.W.B.(VEP94320A), HP JACK P.W.B.(VEP94321A) AND COAXIAL P.W.B.(VEP94322A)**

| OPERATION P.W.B.            |      |                         |      |  |  |
|-----------------------------|------|-------------------------|------|--|--|
| <b>Transistor-Resistors</b> |      | <b>Connectors</b>       |      |  |  |
| QR6001                      | A-5  | FP6001                  | A-1  |  |  |
| QR6002                      | C-3  | FP6002                  | C-12 |  |  |
| QR6003                      | C-3  | <b>X'tal Oscillator</b> |      |  |  |
| QR6043                      | C-9  |                         |      |  |  |
| <b>Integrated Circuits</b>  |      | X6001                   | B-6  |  |  |
|                             |      | <b>Diodes</b>           |      |  |  |
| IC6001                      | B-4  | D6002                   | B-12 |  |  |
| IC6002                      | B-11 | D6003                   | B-12 |  |  |
| IC6003                      | C-3  | D6004                   | B-12 |  |  |
| <b>Switches</b>             |      | D6005                   | B-12 |  |  |
|                             |      | D6008                   | C-6  |  |  |
|                             |      | D6043                   | C-12 |  |  |
|                             |      | D6191                   | B-6  |  |  |
|                             |      | S6001                   | B-4  |  |  |
|                             |      | S6002                   | C-5  |  |  |
|                             |      | S6003                   | B-12 |  |  |
|                             |      | S6004                   | B-3  |  |  |
| S6005                       | B-3  |                         |      |  |  |
| S6008                       | B-3  |                         |      |  |  |
| S6009                       | A-3  |                         |      |  |  |
| S6010                       | B-4  |                         |      |  |  |
| S6041                       | B-1  |                         |      |  |  |

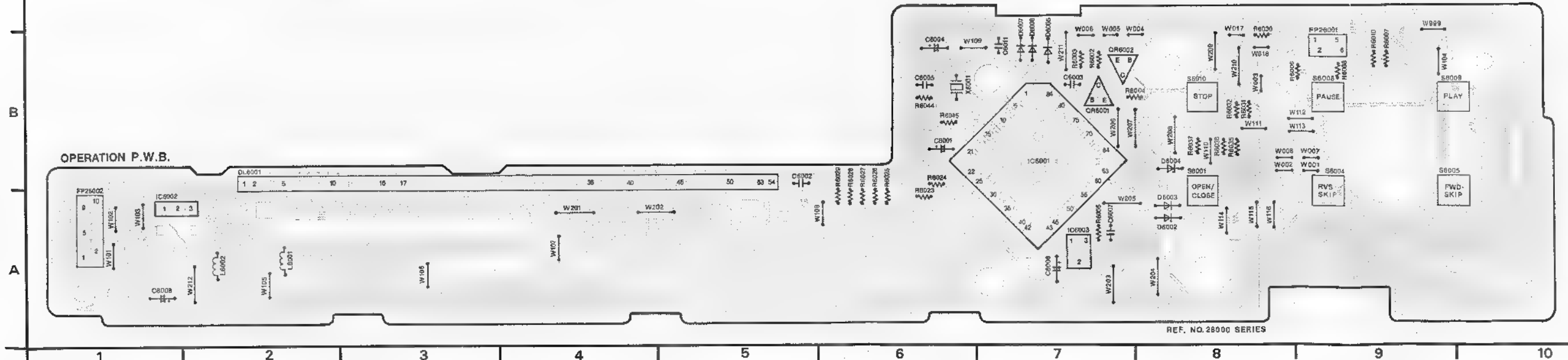
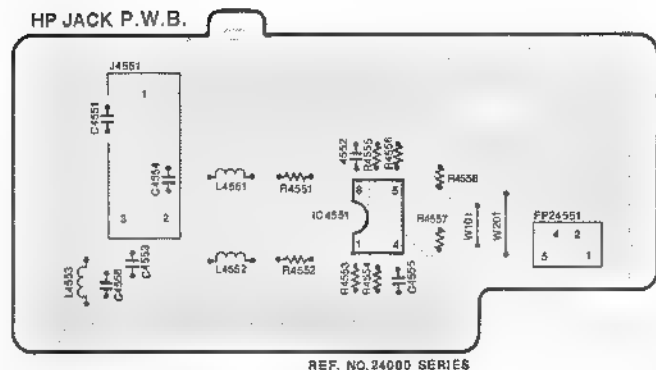
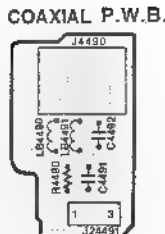
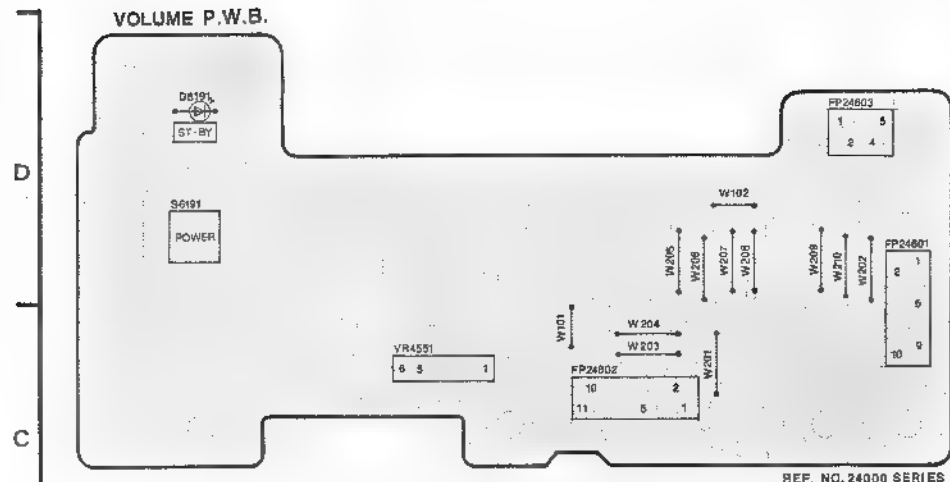
### ADDRESS INFORMATION

|                      |     |
|----------------------|-----|
| <b>VOLUME P.W.B.</b> |     |
| <b>Adjustment</b>    |     |
| VR4551               | E-1 |
| <b>Connectors</b>    |     |
| FP4601               | D-4 |
| FP4602               | D-3 |
| JA                   | D-2 |
| <b>Switch</b>        |     |
| S6191                | D-1 |

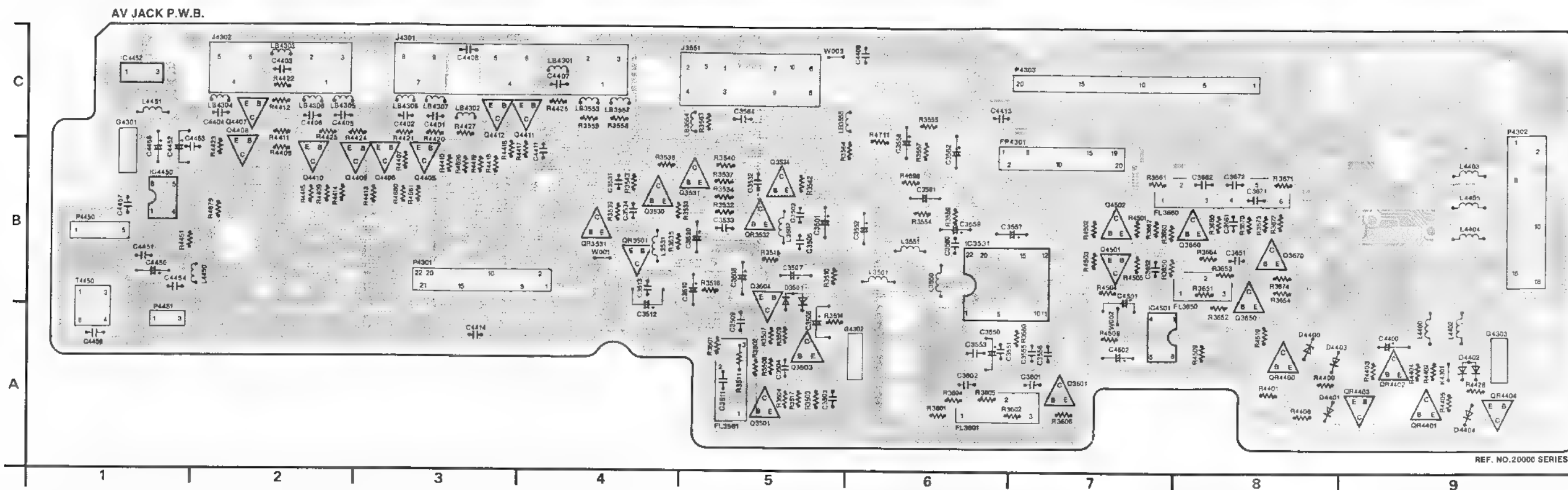
ADDRESS INFORMATION

|                       |     |
|-----------------------|-----|
| HEADPHONE JACK P.W.B. |     |
| Integrated Circuit    |     |
| IC4551                | E-6 |
| Jack                  |     |
| J4551                 | E-6 |

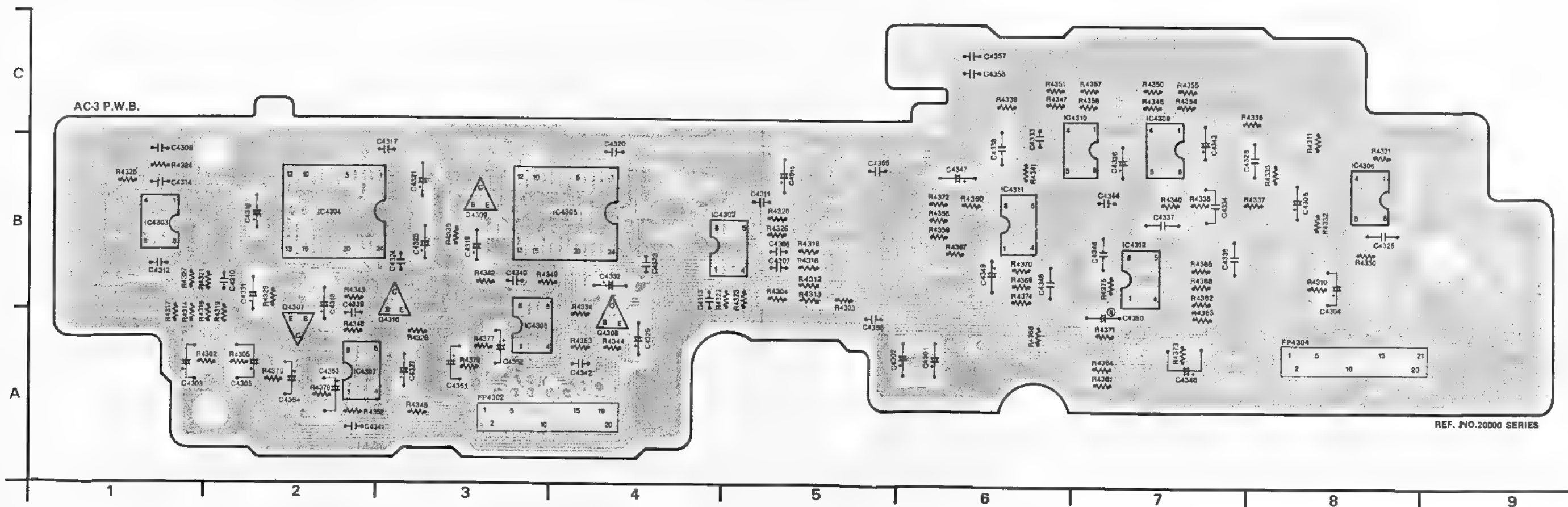
### ADDRESS INFORMATION



**2-20. AV JACK P.W.B.(VEP93304B)**



**2-21. AC-3 C.B.A. (VEP94304A)**



| AV (REAR) JACK P.W.B. |     |                      |     |         |     |
|-----------------------|-----|----------------------|-----|---------|-----|
| Transistors           |     | Transistor-Resistors |     | Jacks   |     |
| Q3501                 | A-5 | QR3501               | B-4 | J3551   | C-5 |
| Q3503                 | A-5 | QR3531               | B-4 | J4301   | C-3 |
| Q3504                 | B-5 | QR3532               | B-5 | J4302   | C-2 |
| Q3530                 | B-4 | QR4400               | A-8 | Filters |     |
| Q3531                 | B-5 | QR4401               | A-9 |         |     |
| Q3534                 | B-5 | QR4402               | A-9 |         |     |
| Q3601                 | A-7 | QR4403               | A-9 |         |     |
| Q3650                 | B-8 | QR4404               | A-9 | FL3501  | A-5 |
| Q3660                 | B-8 | Integrated Circuits  |     | FL3601  | A-6 |
| Q3670                 | B-8 |                      |     | FL3650  | B-8 |
| Q4405                 | B-3 |                      |     | FL3660  | B-8 |
| Q4406                 | B-3 |                      |     | Diodes  |     |
| Q4407                 | C-2 | D3501                | B-5 |         |     |
| Q4408                 | B-2 | D4400                | A-8 |         |     |
| Q4409                 | B-3 | D4401                | A-8 |         |     |
| Q4410                 | B-2 | D4402                | A-9 |         |     |
| Q4411                 | C-4 | D4403                | A-8 |         |     |
| Q4412                 | C-3 | Connectors           |     | D4404   | A-9 |
| Q4501                 | B-7 |                      |     | FP4301  | B-7 |
| Q4502                 | B-7 |                      |     | P4301   | B-3 |
|                       |     |                      |     | P4302   | B-9 |
|                       |     | P4303                | C-7 |         |     |
|                       |     | P4450                | B-1 |         |     |
|                       |     | P4451                | A-1 |         |     |

ADDRESS INFORMATION

| AC-3 P.W.B.         |     |            |     |
|---------------------|-----|------------|-----|
| Transistors         |     | IC24308    |     |
| Q24307              | A-1 | IC24307    | A-2 |
| Q24308              | A-4 | IC24308    | B-3 |
| Q24309              | B-3 | IC24309    | B-7 |
| Q24310              | A-3 | IC24310    | B-6 |
|                     |     | IC24311    | B-6 |
|                     |     | IC24312    | B-7 |
| Integrated Circuits |     | Connectors |     |
| IC24302             | B-4 |            |     |
| IC24303             | B-1 |            |     |
| IC24304             | B-2 |            |     |
| IC24305             | B-4 | FP24302    | A-3 |
|                     |     | FP24304    | A-8 |

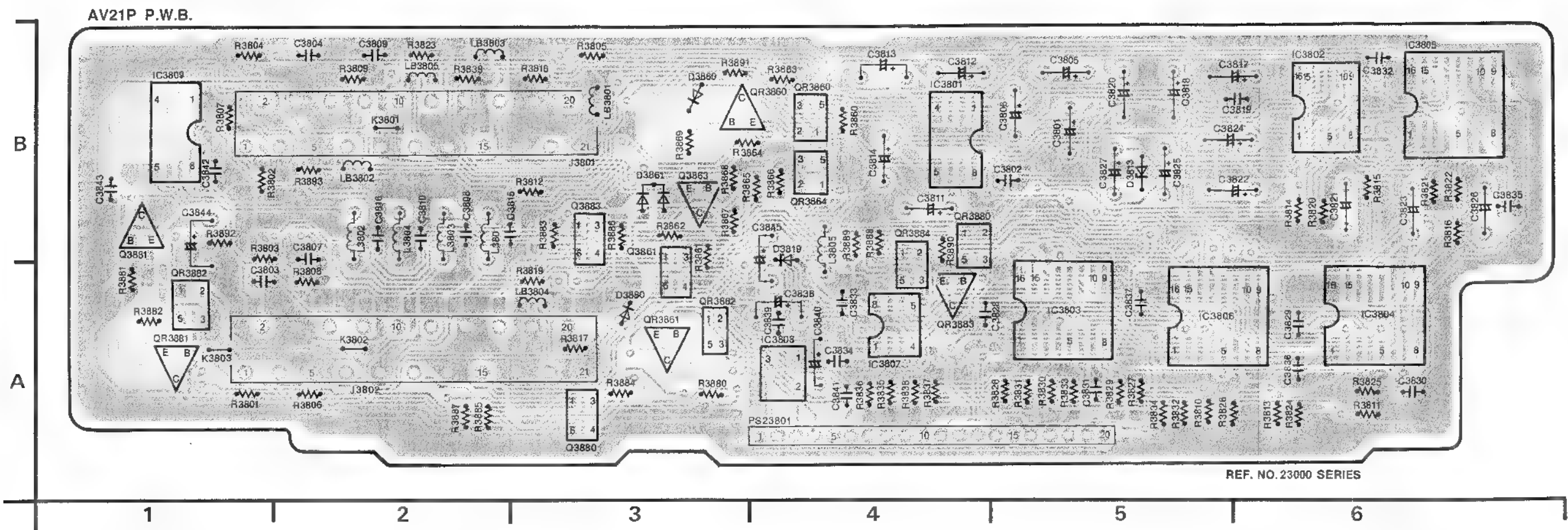
ADDRESS INFORMATION

| AV21P P.W.B.         |     |           |     |
|----------------------|-----|-----------|-----|
| Transistors          |     | IC3803    | A-5 |
| Q3860                | A-4 | IC3804    | A-6 |
| Q3861                | A-3 | IC3805    | B-6 |
| Q3863                | B-2 | IC3806    | A-6 |
| Q3880                | A-2 | IC3807    | A-4 |
| Q3881                | B-1 | IC3808    | A-4 |
| Q3883                | B-3 | IC3809    | B-1 |
| Transistor-Resistors |     | Connector |     |
| QR3860               | B-4 | PS3801    | A-1 |
| QR3861               | A-3 | Diodes    |     |
| QR3882               | A-3 | D3860     | B-3 |
| QR3864               | B-4 | D3861     | B-3 |
| QR3880               | B-4 | D3880     | A-3 |
| QR3881               | A-1 | Jacks     |     |
| QR3882               | A-1 | J3801     | B-3 |
| QR3883               | A-4 | J3802     | A-2 |
| QR3884               | A-4 |           |     |
| Integrated Circuits  |     |           |     |
| IC3801               | B-1 |           |     |
| IC3802               | B-6 |           |     |

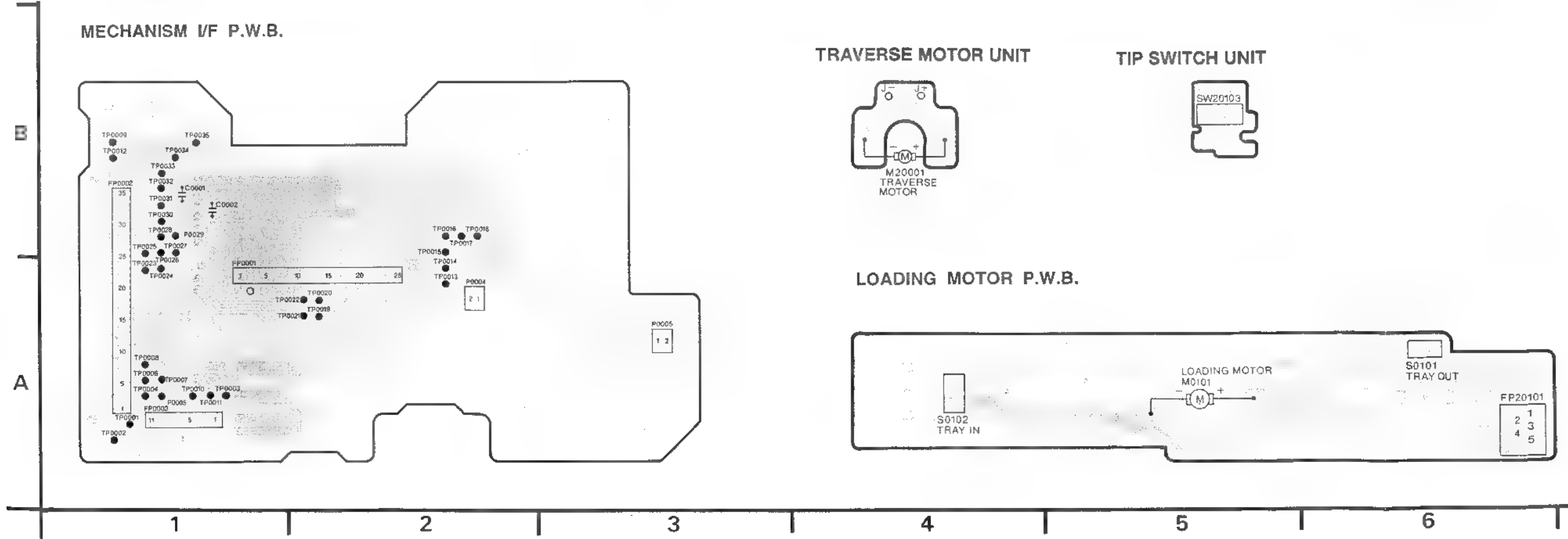
ADDRESS INFORMATION



2-22. AV21P P.W.B. (VEP93305A)



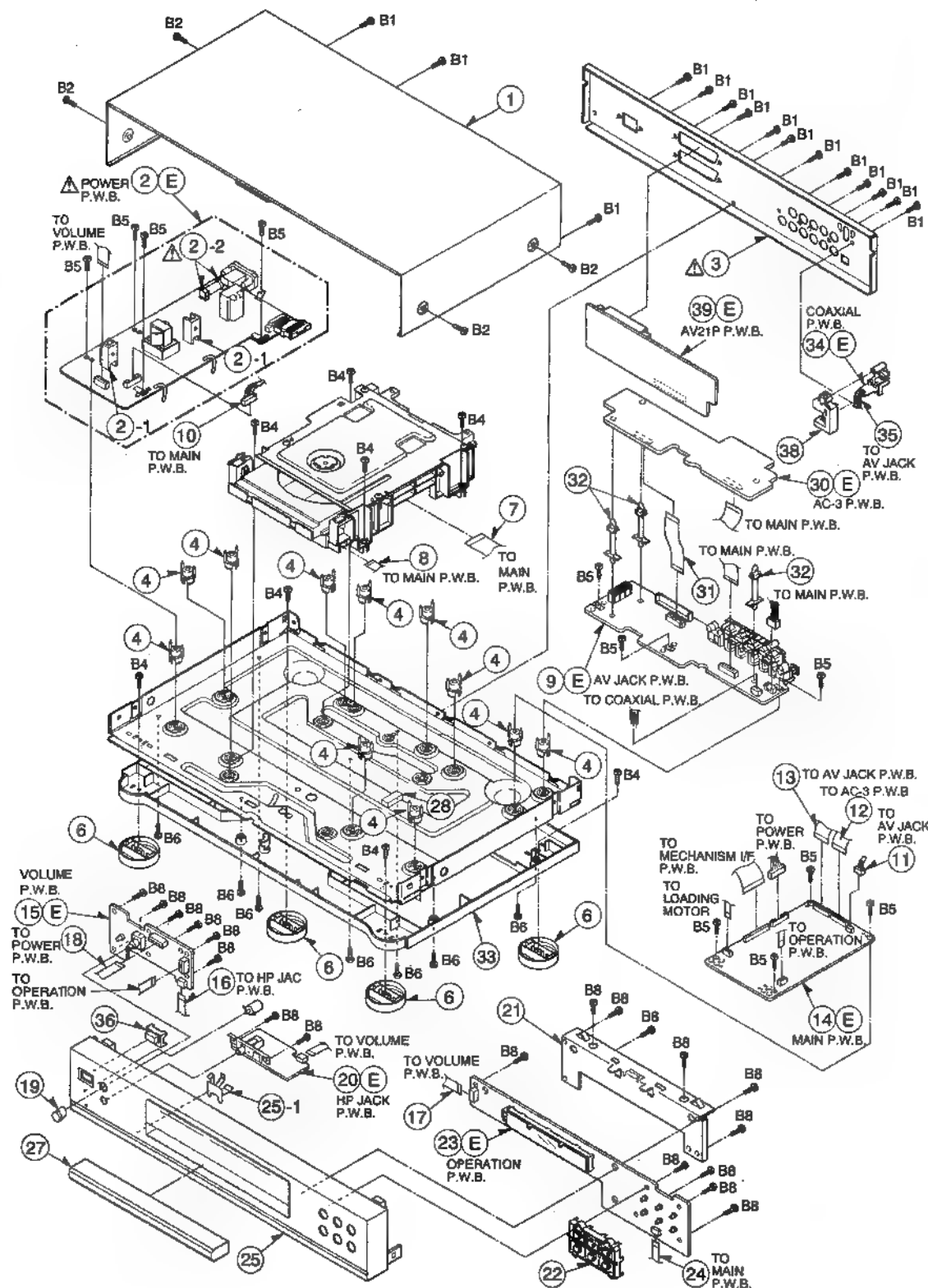
2-23. MECHANISM IF P.W.B. (VEP90367A), TRAVERSE MOTOR U. (VXQ0588), LOADING MOTOR P.W.B.(VEK8001) AND TIP SW U. (VEK8061)



## SECTION 3 EXPLODED VIEWS & REPLACEMENT PARTS LIST

### 3-1. Casing Parts & Mechanism Section

#### 3-1-1. Casing Parts & Mechanism Section Exploded View



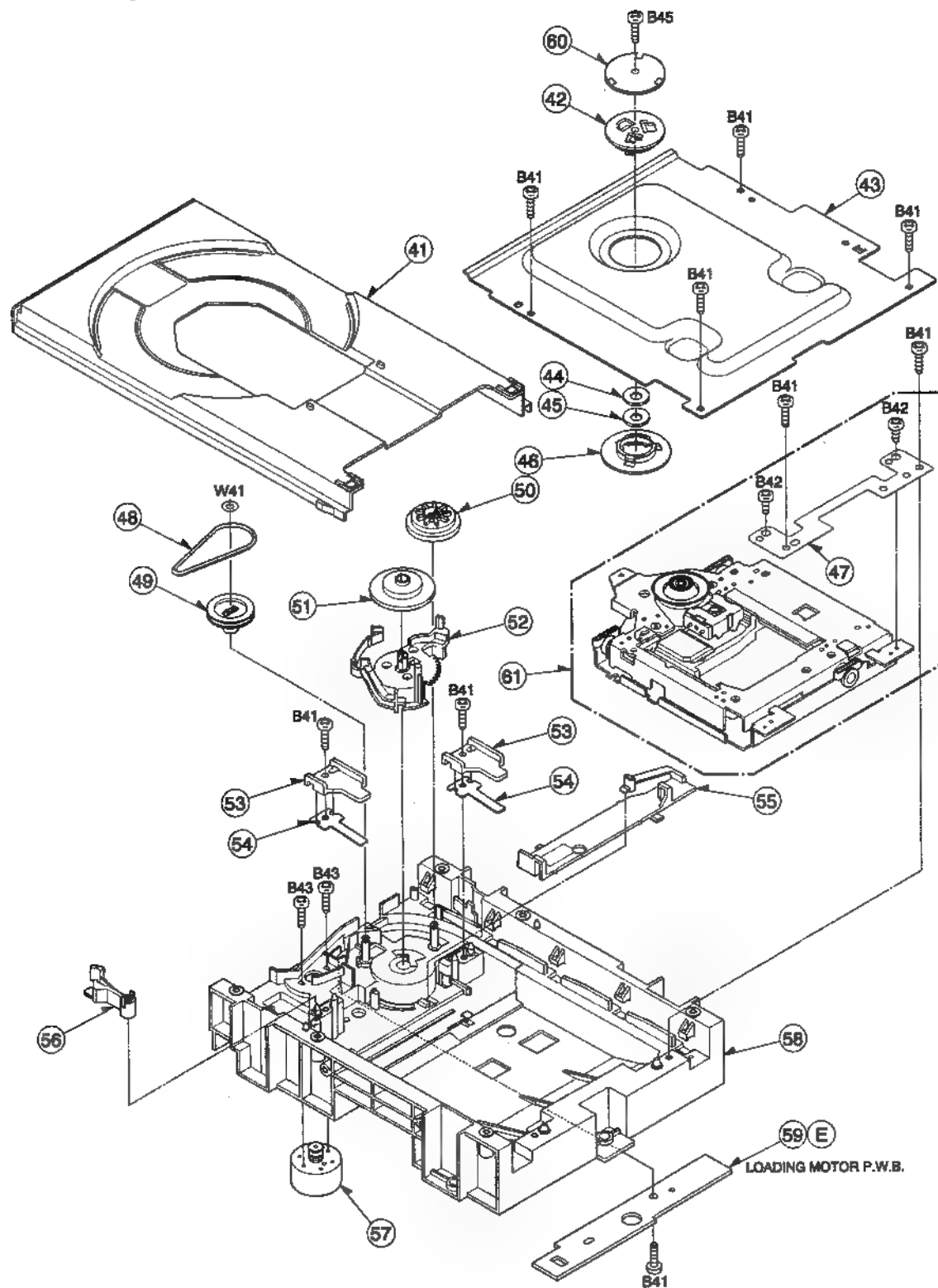
#### 3-1-2. Casing Parts & Mechanism Section Parts List

| Ref. No. | Part No.     | Part Name             | Remarks                | Q'ty | Ref. No. | Part No.     | Part Name     | Remarks    | Q'ty |
|----------|--------------|-----------------------|------------------------|------|----------|--------------|---------------|------------|------|
| 1        | 9MV GM13 96  | Top cover             | VGM1396                | 1    | 36       | 9MV GU75 43  | Power button  | VGU7543    | 1    |
| 1        | 9MV GM13 93  | Top cover             | Black model<br>VGM1393 | 1    | 36       | 9MV GU75 42  | Power button  | VGU7542    | 1    |
| 2        | 928 0116 003 | Power supply P.W.B.   | VEPM1231A              | 1    | 38       | 9MV GQ47 18  | Jack holder   | VGQ4718    | 1    |
| 2-1      | 9MV SC30 76  | Heat sink             | VSC3076                | 2    | 39       | 928 0116 809 | AV 21P P.W.B. | VEP93305A  | 1    |
| 2-2      | 9ME YP52 BC  | Fuse holder           | EYP52BC                | 2    | B1       | 9MV HD06 90  | Screw         | VHD0690    | 15   |
| 2        | 9MV MA00 63  | Rear panel            | VMA0063                | 1    | B2       | 9MV HD10 41  | Screw         | VHD1041    | 4    |
| 4        | 9MV MP51 91  | P.C. board spacer     | VMP5191                | 11   | B4       | 928 0038 152 | Screw         | XTV3+10J   | 8    |
| 6        | 9MV YK76 48  | Leg                   | VYK7648                | 4    | B5       | 928 0081 507 | Screw         | XYE3+EJ14  | 11   |
| 7        | 9MV WJ11 18  | 35P flexible cable    | VWJ1118                | 1    | B6       | 928 0114 704 | Screw         | XTW3+10TFZ | 7    |
| 8        | 9MV WJ11 15  | 5P flexible cable     | VWJ1115                | 1    | B8       | 928 0012 000 | Screw         | XTV3+10G   | 19   |
| 9        | 928 0116 100 | AV jack P.W.B.        | VEP93304B              | 1    |          |              |               |            |      |
| 10       | 9MV EEOC 36  | 8 Pin cable           | VEEOC36                | 1    |          |              |               |            |      |
| 11       | 9MV EEOC 37  | Shield cable          | VEEOC37                | 1    |          |              |               |            |      |
| 12       | 928 0110 575 | 21P flexible cable    | VWJ21D1070MM           | 1    |          |              |               |            |      |
| 13       | 928 0110 588 | 22P flexible cable    | VWJ22D1070MM           | 1    |          |              |               |            |      |
| 14       | 928 0116 207 | Main P.W.B.           | VEP96512T              | 1    |          |              |               |            |      |
| 15       | 928 0116 304 | Volume P.W.B.         | VEP94320A              | 1    |          |              |               |            |      |
| 16       | 928 0110 591 | 5P flexible cable     | VWJ05TW090BB           | 1    |          |              |               |            |      |
| 17       | 928 0067 505 | 10P flexible cable    | VWJ10A0060BB           | 1    |          |              |               |            |      |
| 18       | 928 0115 606 | 11P flexible cable    | VWJ11A0060BB           | 1    |          |              |               |            |      |
| 19       | 9MV GU73 96  | Volume knob           | VGU7396                | 1    |          |              |               |            |      |
| 19       | 9MV GU75 46  | Volume knob           | Black model<br>VGU7546 | 1    |          |              |               |            |      |
| 20       | 928 0116 401 | Headphone jack P.W.B. | VEP94321A              | 1    |          |              |               |            |      |
| 21       | 9MV MA95 57  | Front angle           | VMA9557                | 1    |          |              |               |            |      |
| 22       | 9MV GU75 45  | Operation button      | VGU7545                | 1    |          |              |               |            |      |
| 22       | 9MV GU75 44  | Operation button      | Black model<br>VGU7544 | 1    |          |              |               |            |      |
| 23       | 928 0116 508 | Operation P.W.B.      | VEP96530A              | 1    |          |              |               |            |      |
| 24       | 9MV WJ12 41  | Flexible cable        | VWJ1241                | 1    |          |              |               |            |      |
| 25       | 9MV YP68 56  | Front panel           | VYP6856                | 1    |          |              |               |            |      |
| 25       | 9MV YP68 57  | Front panel           | Black model<br>VYP6857 | 1    |          |              |               |            |      |
| 25-1     | 9MV MC13 43  | Ground terminal       | VMC1343                | 1    |          |              |               |            |      |
| 27       | 9MV GK22 70  | Tray top              | VGK2270                | 1    |          |              |               |            |      |
| 27       | 9MV GK22 69  | Tray top              | Black model<br>VGK2269 | 1    |          |              |               |            |      |
| 28       | 9MV MT05 45  | Spacer                | VMT0545                | 1    |          |              |               |            |      |
| 28       | 9MV GL07 42  | Holder                | VGL0742                | 1    |          |              |               |            |      |
| 30       | 928 0116 605 | AC-3 P.W.B.           | VEP94304A              | 1    |          |              |               |            |      |
| 31       | 928 0081 002 | 20P Flexible cable    | VWJ20D1100MM           | 1    |          |              |               |            |      |
| 32       | 9MV MX20 01  | P.C. board spacer     | VMX2001                | 1    |          |              |               |            |      |
| 33       | 9MV KM49 79  | Bottom cover          | VKM4979                | 1    |          |              |               |            |      |
| 33       | 9MV KM49 20  | Bottom cover          | Black model<br>VKM4920 | 1    |          |              |               |            |      |
| 34       | 928 0116 702 | Coaxial P.W.B.        | VEP94322A              | 1    |          |              |               |            |      |
| 35       | 928 0114 500 | 3P Flexible cable     | VWJ03D5060QV           | 1    |          |              |               |            |      |



## 3-2. Loading Mechanism Section

### 3-2-1. Loading Mechanism Section Exploded View



### 3-2-2. Loading Mechanism Section Parts List

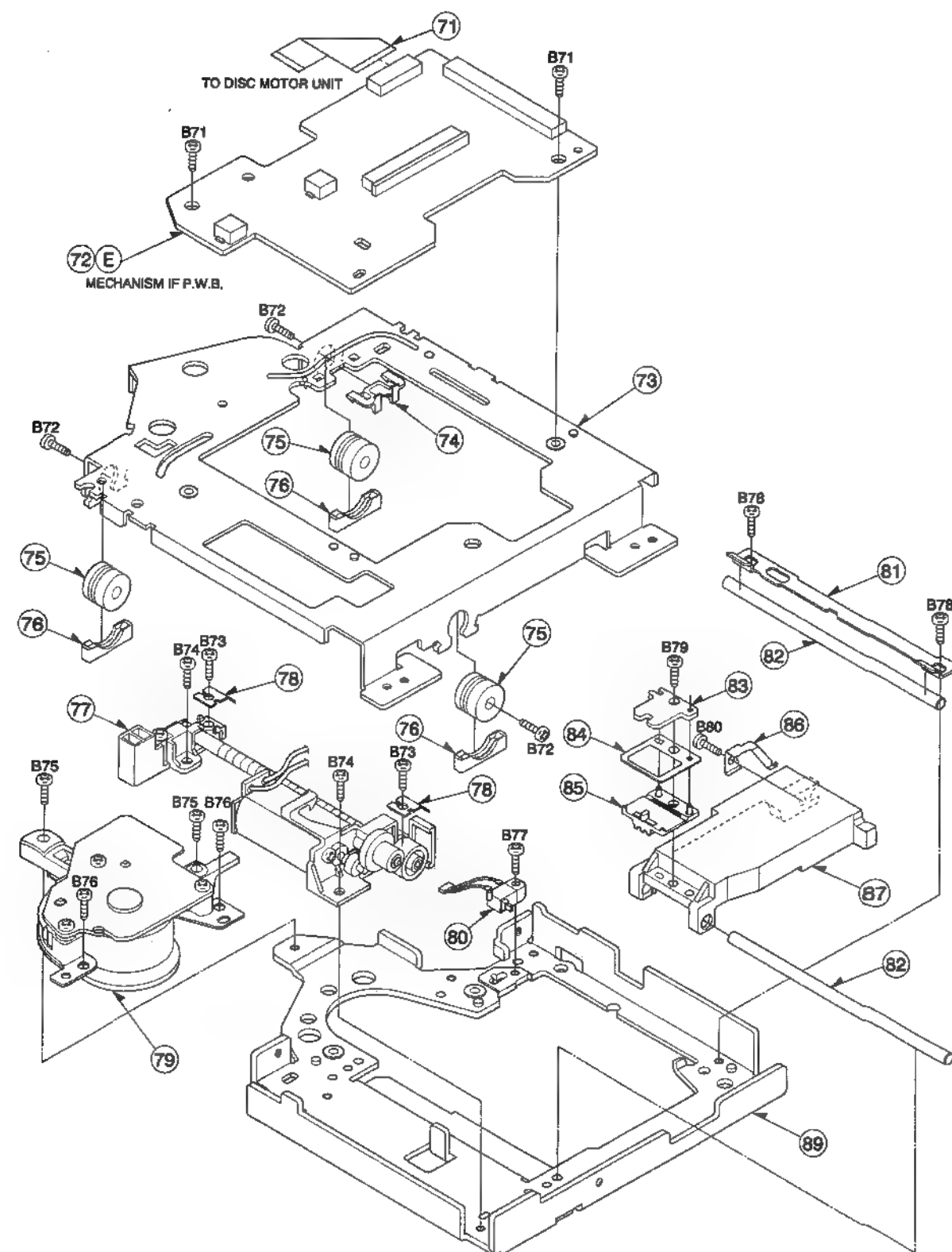
| Ref. No. | Part No.     | Part Name            | Remarks      | Q'ty |
|----------|--------------|----------------------|--------------|------|
| 41       | 9MV MD26 43  | Tray                 | VMD2643      | 1    |
| 42       | 9MV MD26 40  | Clamper holder       | VMD2640      | 1    |
| 43       | 9MV MA95 34  | Clamper plate        | VMA9534      | 1    |
| 44       | 9MV MA95 35  | Clamper back yoke    | VMA9535      | 1    |
| 45       | 9MV SQ10 02  | Clamper magnet       | VSQ1002      | 1    |
| 46       | 9MV MD26 39  | Clamper              | VMD2639      | 1    |
| 47       | 9MV MC12 64  | Support spring       | VMC1264      | 1    |
| 48       | 9MV DV03 73  | Square belt          | VDV0373      | 1    |
| 49       | 9MV DG12 29  | Pulley gear          | VDG1229      | 1    |
| 50       | 9MV DG12 31  | Tray gear            | VDG1231      | 1    |
| 51       | 9MV DG12 27  | Rotation gear        | VDG1227      | 1    |
| 52       | 9MV DK01 50  | Rotary cam           | VDK0150      | 1    |
| 53       | 9MV MA95 72  | Chassis stopper      | VMA9572      | 2    |
| 54       | 9MV MC12 67  | Chassis holder       | VMC1267      | 2    |
| 55       | 9MV MD26 41  | Slider               | VMD2641      | 1    |
| 56       | 9MV MD26 42  | Switch lever         | VMD2642      | 1    |
| 57       | 9MV EM06 09  | Loading motor unit   | VEM0609      | 1    |
| 58       | 9MV MD26 83  | Loading base         | VMD2683      | 1    |
| 59       | 9MV EK80 01  | Loading motor P.W.B. | VEK8001      | 1    |
| 60       | 9MV MA96 95  | Clamper weight       | VMA9695      | 1    |
| 61       | 9MV XK13 63  | Traverse unit        | VXK1363      | 1    |
| B41      | 928 0067 819 | Screw                | XTV26+8G     | 9    |
| B42      | 928 0067 806 | Screw                | XYC26+BF5FZN | 2    |
| B43      | 928 0067 822 | Screw                | XQNQC17+3    | 2    |
| B45      | 928 0067 848 | Screw                | XTS26+6J     | 1    |
| W41      | 9MV MX26 41  | Washer               | VMX2641      | 1    |

### 3-3. Traverse Section

#### 3-3-1. Traverse Section Parts List

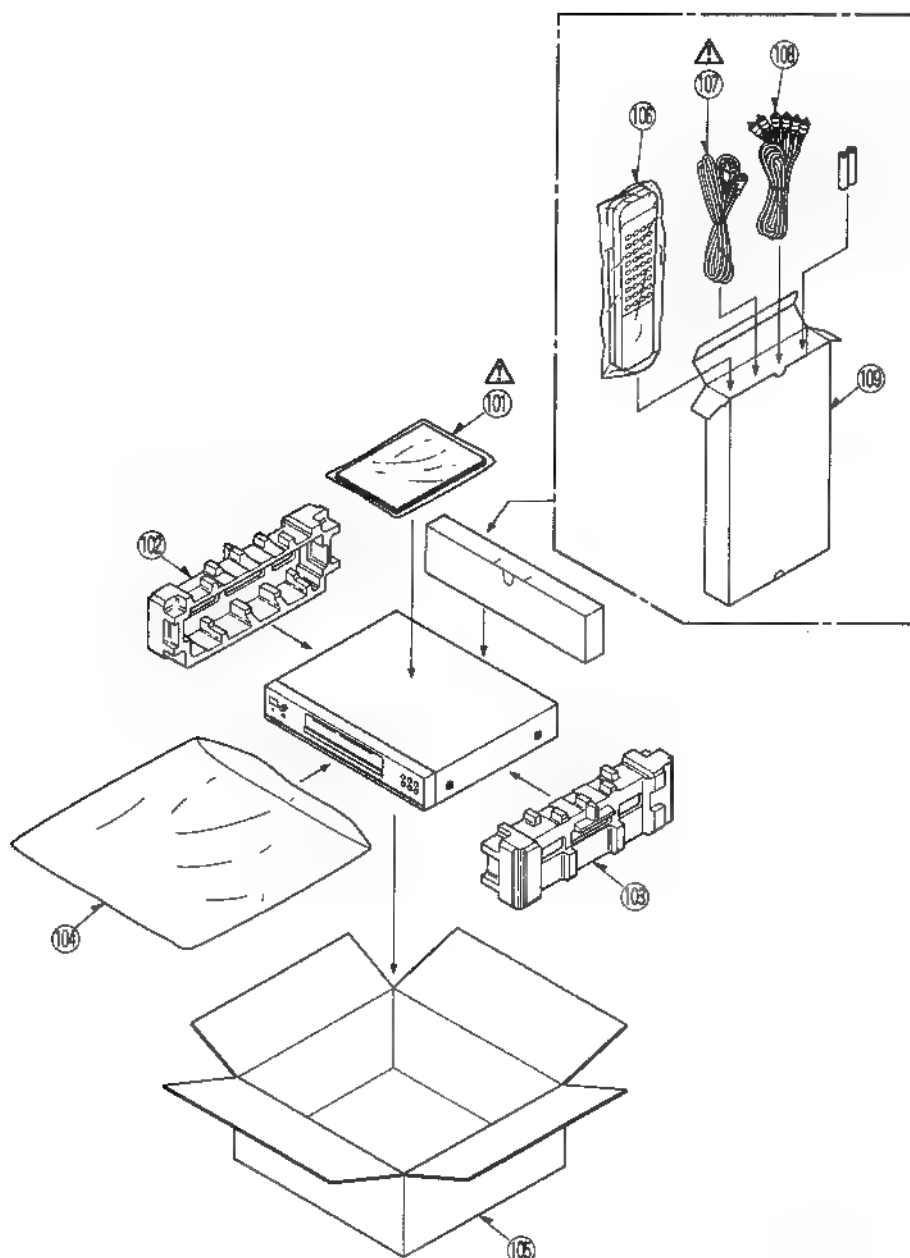
| Ref. No. | Part No.     | Part Name               | Remarks    | Q'ty |
|----------|--------------|-------------------------|------------|------|
| 71       | 9MV WJ11 16  | 11P Flexible cable      | VWJ1116    | 1    |
| 72       | 928 0090 608 | Mechanism IF P.W.B.     | VEP90367A  | 1    |
| 73       | 9MV XA57 86  | D Chassis unit          | VXA5786    | 1    |
| 74       | 9MV MD26 82  | Switch clasper          | VMD2682    | 1    |
| 75       | 9MV MG10 01  | Damper                  | VMG1001    | 3    |
| 76       | 9MV MD26 75  | Damper holder           | VMD2675    | 3    |
| 77       | 9MV XQ05 88  | Traverse motor unit     | VXQ0588    | 1    |
| 78       | 9MV MC12 62  | Main shaft holder       | VMC1262    | 2    |
| 79       | 9MV XA60 65  | Disk motor unit         | VXA6065    | 1    |
| 80       | 9MV EK80 61  | Tip switch unit         | VEK8061    | 1    |
| 81       | 9MV MC12 60  | Sub shaft holder        | VMC1260    | 1    |
| 82       | 9MV MS60 98  | Guide shaft             | VMS6098    | 2    |
| 83       | 9MV MA95 32  | Nut stopper             | VMA9532    | 1    |
| 84       | 9MV MC12 63  | Nut hold spring         | VMC1263    | 1    |
| 85       | 9MV MD26 37  | Screw nut               | VMD2637    | 1    |
| 86       | 9MV MC12     | PU over pressure spring | VMC1265    | 1    |
| 87       | 9MV ED03 78  | Optical pick up unit    | VED0378    | 1    |
| 89       | 9MV MK04 33  | H Chassis               | VMK0433    | 1    |
| B71      | 928 0068 009 | Screw                   | XTB26+5F   | 2    |
| B72      | 9MV HD10 32  | Screw                   | VHD1032    | 3    |
| B73      | 928 0068 012 | Screw                   | XYC2+JF10  | 2    |
| B74      | 928 0068 025 | Screw                   | XYN2+J4    | 2    |
| B75      | 928 0068 038 | Screw                   | XVE26B10FP | 2    |
| B76      | 928 0068 041 | Screw                   | XYC2+JF5   | 2    |
| B77      | 928 0068 054 | Screw                   | XYN2+J8    | 1    |
| B78      | 928 0068 067 | Screw                   | XSN2+3     | 2    |
| B79      | 928 0068 070 | Screw                   | XQN17+C5   | 1    |
| B80      | 9MV HD10 57  | Screw                   | VHD1057    | 1    |

#### 3-3-2. Traverse Section Exploded View



### 3-4. Packing & Accessories Section

#### 3-4-1. Packing & Accessories Section Exploded View



#### 3-4-2. Packing & Accessories Section Parts List

| Ref. No. | Part No.    | Part Name              | Remarks                | Q'ty | Ref. No. | Part No.    | Part Name           | Remarks               | Q'ty |
|----------|-------------|------------------------|------------------------|------|----------|-------------|---------------------|-----------------------|------|
| 101      | 9MV QT74 77 | Operating instructions | VQT7477                | 1    | 105      | 9MV PG94 25 | Packing case        | VPG9425<br>Gold model | 1    |
| 102      | 9MV PN48 65 | Cushion (L)            | VPN4865                | 1    | 106      | 9MV EQ21 03 | Remote control unit | VEQ2103               | 1    |
| 103      | 9MV PN48 66 | Cushion (R)            | VPN4866                | 1    | 107      | 9MV JA06 64 | AC cord             | VJA0664               | 1    |
| 104      | 9MV PF07 31 | Polyethylene bag       | VPF0731                | 1    | 108      | 9MV JA07 88 | AV cord             | VJA0788               | 1    |
| 105      | 9MV PG93 94 | Packing case           | VPG9394<br>Black model | 1    | 109      | 9MV PK21 20 | Accessory case      | VPK2120               | 1    |

## NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (I) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film  $\pm 5\%$ , 1/4W Type III the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

### WARNING:

Parts marked with this symbol  have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

### ● Resistors

Ex.: **RN** **14K** **2E** **1B2** **G** **FR**  
 Type Shape Power Resistance Allowable Others  
 and performance

|                       |           |                |                          |
|-----------------------|-----------|----------------|--------------------------|
| RD : Carbon           | 2B : 1/8W | F : $\pm 1\%$  | P : Pulse-resistant type |
| RC : Composition      | 2E : 1/4W | G : $\pm 2\%$  | NL : Low noise type      |
| RS : Metal oxide film | 2H : 1/2W | J : $\pm 5\%$  | NB : Non-burning type    |
| RW : Winding          | 3A : 1W   | K : $\pm 10\%$ | FR : Fuse-resistor       |
| RN : Metal film       | 3D : 2W   | M : $\pm 20\%$ | F : Lead wire forming    |
| RK : Metal mixture    | 3F : 3W   |                |                          |
|                       | 3H : 5W   |                |                          |

#### \* Resistance

$\overset{1}{\text{---}} \overset{R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$   
 Indicates number of zeros after effective number.  
 2-digit effective number.

• Units: ohm

$\overset{1}{\text{---}} \overset{R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1.2 \text{ ohm}$   
 1-digit effective number.  
 2-digit effective number, decimal point indicated by R.

• Units: ohm

### ● Capacitors

Ex.: **CE** **04W** **1H** **2B2** **M** **BP**  
 Type Shape Dielectric Capacity Allowable Others  
 and performance strength error

|                                  |           |                         |                                  |
|----------------------------------|-----------|-------------------------|----------------------------------|
| CE : Aluminum foil electrolytic  | 0J : 0.3V | F : $\pm 1\%$           | HS : High stability type         |
| CA : Aluminum solid electrolytic | 1A : 10V  | G : $\pm 2\%$           | BP : Non-polar type              |
| CS : Tantalum electrolytic       | 1C : 16V  | J : $\pm 5\%$           | HR : Ripple-resistant type       |
| CG : Film                        | 1E : 25V  | K : $\pm 10\%$          | DL : For charge and discharge    |
| CK : Ceramic                     | 1V : 35V  | M : $\pm 20\%$          | HF : For assuring high frequency |
| CC : Ceramic                     | 1H : 50V  | Z : $\pm 80\%$          | U : UL part                      |
| CP : Oil                         | 2A : 100V | -20%                    | C : CSA part                     |
| CM : Mica                        | 2B : 125V | P : $\pm 100\%$         | W : UL-CSA type                  |
| CF : Metallized                  | 2C : 160V | -0%                     | ■ : Lead wire forming            |
| CH : Metallized                  | 2D : 200V | C : $\pm 0.25\text{pF}$ |                                  |
|                                  | 2E : 250V | D : $\pm 0.5\text{pF}$  |                                  |
|                                  | 2H : 500V | = : Others              |                                  |
|                                  | 2J : 630V |                         |                                  |

#### \* Capacity (electrolyte only)

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200\mu\text{F}$   
 Indicates number of zeros after effective number.  
 2-digit effective number.

• Units:  $\mu\text{F}$ .

$\overset{2}{\text{---}} \overset{R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2.2\mu\text{F}$   
 1-digit effective number.  
 2-digit effective number, decimal point indicated by R.

• Units:  $\mu\text{F}$ .

#### \* Capacity (except electrolyte)

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200\text{pF} = 0.0022\mu\text{F}$   
 (More than 2) — Indicates number of zeros after effective number.  
 2-digit effective number.

• Units:  $\mu\text{F}$ .

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{1}{\text{---}} \Rightarrow 220\text{pF}$   
 (0 or 1) — Indicates number of zeros after effective number.  
 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

### ● About Ref No. in the Parts List of P.W.B.

As the first numeric (2) in "Ref No." represents a series, the numerics from the 2nd to 5th digit correspond with the Ref No. in circuit diagram or P.W.B.

(e. g., List Ref No. C22001=Ref No. C2001 in Circuit Diagram)

# PARTS LIST OF P.W.B. UNIT MAIN P.W.B.

| Ref. No.             | Part No.     | Part Name                  | Remarks | Ref. No.        | Part No. | Part Name                 | Remarks     |
|----------------------|--------------|----------------------------|---------|-----------------|----------|---------------------------|-------------|
| SEMICONDUCTORS GROUP |              |                            |         | RESISTORS GROUP |          |                           |             |
| IC22001              | 928 0092 101 | IC MN67702VRZC             |         | R22002          |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 |
| IC22501              | 928 0092 208 | IC BA6849FP                |         | R22003          |          | Carbon chip 10kohm 1/16W  | ERJ3GEYJ103 |
| IC22511              | 928 0092 305 | IC AN8813NSBS              |         | R22004          |          | Carbon chip 2kohm 1/16W   | ERJ3GEYJ202 |
| IC23001              | 928 0092 402 | IC MN67750EXA              |         | R22005          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 |
| IC23051              | 928 0092 606 | IC T591616AFT12            |         | R22006          |          | Carbon chip 27kohm 1/16W  | ERJ3GEYJ273 |
| IC23081              | 928 0110 106 | IC HM5241605T12            |         | R22007          |          | Carbon chip 8.2kohm 1/16W | ERJ3GEYG822 |
| IC23201              | 928 0110 203 | IC MC44724VFU              |         | R22008          |          | Carbon chip 27kohm 1/16W  | ERJ3GEYJ273 |
| IC23251              | 928 0068 708 | IC AN78L05M                |         | R22009          |          | Carbon chip 18kohm 1/16W  | ERJ3GEYJ183 |
| IC24201              | 928 0092 703 | IC PCM1716E                |         | R22010          |          | Carbon chip 33kohm 1/16W  | ERJ3GEYJ333 |
| IC24211              | 928 0092 703 | IC PCM1716E                |         | R22011          |          | Carbon chip 27kohm 1/16W  | ERJ3GEYJ273 |
| IC24221              | 928 0092 703 | IC PCM1716E                |         | R22012~14       |          | Carbon chip 6.8kohm 1/16W | ERJ3GEYG682 |
| IC24231              | 928 0092 800 | IC NJU3711M                |         | R22015,16       |          | Carbon chip 5.6kohm 1/16W | ERJ3GEYJ562 |
| IC24232              | 928 0110 300 | IC TC7W32FU                |         | R22018~23       |          | Carbon chip 5.6kohm 1/16W | ERJ3GEYJ562 |
| IC24241              | 928 0069 600 | IC TC7ST04FU               |         | R22027          |          | Carbon chip 5.6kohm 1/16W | ERJ3GEYJ562 |
| IC25201              | 928 0093 207 | IC AN8825NFHQ-V            |         | R22028          |          | Carbon chip 1.2kohm 1/16W | ERJ3GEYJ122 |
| IC26201              | 928 0093 304 | IC MN102L25ZN2             |         | R22029          |          | Carbon chip 5.1kohm 1/16W | ERJ3GEYF512 |
| IC26301              | 928 0093 401 | IC TC58F400FTA             |         | R22501          |          | Carbon chip 270ohm 1/16W  | ERJ3GEYJ271 |
| IC26311              | 928 0110 407 | IC PST9142NR               |         | R22502,03       |          | Carbon chip 10kohm 1/16W  | ERJ3RBD103  |
| IC26312              | 928 0093 508 | IC X25C02ST2               |         | R22504,05       |          | Carbon chip 22kohm 1/16W  | ERJ3RBD223  |
| IC26503              | 928 0093 702 | IC TCVHC157FTEL            |         | R22506          |          | Carbon chip 270ohm 1/16W  | ERJ3GEYJ271 |
| IC26505              | 928 0069 202 | IC TC7SHU04FU              |         | R22507          |          | Carbon chip 0.39ohm 1/16W | ERJ14YKR39  |
| IC26507,08           | 928 0069 202 | IC TC7SHU04FU              |         | R22511~13       |          | Carbon chip 6.8kohm 1/16W | ERJ3GEYG682 |
| IC26501~04           | 928 0069 202 | IC TC7SHU04FU              |         | R22514          |          | Carbon chip 56kohm 1/16W  | ERJ3GEYJ563 |
| IC26607              | 928 0056 105 | IC NJM2115V                |         | R22515          |          | Carbon chip 12kohm 1/16W  | ERJ3RBD123  |
| IC27001              | 928 0093 809 | IC MN103005AN2G            |         | R22516,17       |          | Carbon chip 47kohm 1/16W  | ERJ3RBD473  |
| IC27051              | 928 0093 906 | IC M4V4265CT7ST            |         | R22518          |          | Carbon chip 12kohm 1/16W  | ERJ3RBD123  |
| Q23001,02            | 928 0094 604 | Transistor 2SB1218A-R      |         | R23001          |          | Carbon chip 22ohm 1/16W   | ERJ3GEYJ220 |
| Q23201               | 928 0094 604 | Transistor 2SB1218A-R      |         | R23002          |          | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00 |
| Q23202               | 928 0094 604 | Transistor 2SB1218A-R      |         | R23003          |          | Carbon chip 3.9kohm 1/16W | ERJ3GEYJ392 |
| Q23211               | 928 0094 604 | Transistor 2SB1218A-R      |         | R23005          |          | Carbon chip 10kohm 1/16W  | ERJ3GEYJ103 |
| Q25201               | 928 0072 600 | Transistor 2SB1115-T       |         | R23007          |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 |
| QR26311              | 928 0072 804 | Transistor-resistor UN5212 |         | R23009          |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 |
| D22001               | 928 0090 705 | Diode MA111                |         | R23021          |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 |
| D23001               | 928 0090 802 | Diode MA8030-H             |         | R23022          |          | Carbon chip 1.5kohm 1/16W | ERJ3GEYG152 |
| D23002               | 928 0090 705 | Diode MA111                |         | R23023          |          | Carbon chip 820ohm 1/16W  | ERJ3GEYJ821 |
| D25311,12            | 928 0090 909 | Diode MA728                |         | R23028          |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
| D26601,02            | 928 0110 009 | Diode MA304                |         | R23030          |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
|                      |              |                            |         | R23033,34       |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
|                      |              |                            |         | R23036,37       |          | Carbon chip 33ohm 1/16W   | ERJ3GEYJ330 |
|                      |              |                            |         | R23201          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYF101 |
|                      |              |                            |         | R23202          |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
|                      |              |                            |         | R23203          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 |
|                      |              |                            |         | R23211          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 |
|                      |              |                            |         | R23212          |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
|                      |              |                            |         | R23213          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 |
|                      |              |                            |         | R23221          |          | Carbon chip 100ohm 1/16W  | ERJ3GEYF101 |
|                      |              |                            |         | R23222          |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 |
|                      |              |                            |         | R23223~25       |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 |

| Ref. No.  | Part No. | Part Name                 | Remarks     | Ref. No.                | Part No.     | Part Name                 | Remarks      |
|-----------|----------|---------------------------|-------------|-------------------------|--------------|---------------------------|--------------|
| R23230    |          | Carbon chip 1Mohm 1/16W   | ERJ3GEYJ105 | R27001                  |              | Carbon chip 1kohm 1/16W   | ERJ3GEYG102  |
| R23231    |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 | R27002                  |              | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473  |
| R23232    |          | Carbon chip 330ohm 1/16W  | ERJ3GEYJ331 | R27003                  |              | Carbon chip 470ohm 1/16W  | ERJ3GEYG471  |
| R23233    |          | Carbon chip 3.3kohm 1/16W | ERJ3GEYG332 | R27004                  |              | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473  |
| R23234    |          | Carbon chip 330ohm 1/16W  | ERJ3GEYJ331 | R27051~55               |              | Carbon chip 33ohm 1/16W   | ERJ3GEYJ330  |
| R23235    |          | Carbon chip 3.3kohm 1/16W | ERJ3GEYG332 |                         |              |                           |              |
| R23236    |          | Carbon chip 1kohm 1/16W   | ERJ3GEYG102 | K22001                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R23237    |          | Carbon chip 1Mohm 1/16W   | ERJ3GEYJ105 | K22003                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R23238    |          | Carbon chip 100ohm 1/16W  | ERJ3GEYF101 | K23021,22               |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R23239    |          | Carbon chip 22ohm 1/16W   | ERJ3GEYJ220 |                         |              |                           |              |
| R23240    |          | Carbon chip 100ohm 1/16W  | ERJ3GEYJ101 | K23201                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R23243    |          | Carbon chip 330ohm 1/16W  | ERJ3GEYJ331 | K24201~03               |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R24241    |          | Carbon chip 150ohm 1/16W  | ERJ3GEYJ151 |                         |              |                           |              |
| R25201    |          | Carbon chip 10ohm 1/2W    | ERJ12YJ100  | K26311                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R25202    |          | Carbon chip 12kohm 1/16W  | ERJ3GEYJ123 |                         |              |                           |              |
| R25205    |          | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00 | K26502                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R25206    |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 |                         |              |                           |              |
| R25207    |          | Carbon chip 43kohm 1/16W  | ERJ3GEYJ433 | K26602                  |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R25209    |          | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00 | K26604,05               |              | Carbon chip 0ohm 1/16W    | ERJ3GEY0R00  |
| R25210    |          | Carbon chip 6.8kohm 1/16W | ERJ3GEYF682 |                         |              |                           |              |
| R25211    |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 | RA23001                 | 92B 9018 102 | Resistor-resistor 47kohm  | EXBV8V473J   |
| R25212    |          | Carbon chip 7.5kohm 1/16W | ERJ3GEYJ752 | RA23002                 | 92B 9018 115 | Resistor-resistor 47kohm  | EXBV4V473J   |
| R25213    |          | Carbon chip 10kohm 1/16W  | ERJ3GEYJ103 |                         |              |                           |              |
| R25214    |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 | RA23241                 | 92B 9018 128 | Resistor-resistor 330ohm  | EXBV4V331J   |
| R25215    |          | Carbon chip 3.3kohm 1/16W | ERJ3GEYG332 | RA23242,43              | 92B 9018 157 | Resistor-resistor 470ohm  | EXBV8V471J   |
| R25216    |          | Carbon chip 6.8kohm 1/16W | ERJ3GEYF682 |                         |              |                           |              |
| R25217,18 |          | Carbon chip 470kohm 1/16W | ERJ3GEYJ474 | RA26201,02              | 92B 9018 131 | Resistor-resistor 10kohm  | EXBV4V103J   |
| R25219,20 |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 | RA26203                 | 92B 9018 144 | Resistor-resistor 2.2kohm | EXBV4V222J   |
| R25221,22 |          | Carbon chip 33kohm 1/16W  | ERJ3GEYJ333 | RA26204~06              | 92B 9018 115 | Resistor-resistor 47kohm  | EXBV4V473J   |
| R25223    |          | Carbon chip 510kohm 1/16W | ERJ3GEYJ514 | RA27001                 | 92B 9018 160 | Resistor-resistor 470ohm  | EXBV4V471J   |
| R25224    |          | Carbon chip 2.2ohm 1/16W  | ERJ3GEYJ2R2 | RA27002,03              | 92B 9018 102 | Resistor-resistor 47kohm  | EXBV8V473J   |
| R26201    |          | Carbon chip 10kohm 1/16W  | ERJ3GEYJ103 |                         |              |                           |              |
| R26202    |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 | VR23231,32              | 92B 0110 601 | Variable resistor 2kohm   | VRV0293B202T |
| R26203    |          | Carbon chip 2.2kohm 1/16W | ERJ3GEYJ222 | VR23233                 | 92B 0096 903 | Variable resistor 200ohm  | VRV0293B201T |
| R26204    |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 |                         |              |                           |              |
| R26205    |          | Carbon chip 2.2kohm 1/16W | ERJ3GEYJ222 |                         |              |                           |              |
| R26206,07 |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 |                         |              |                           |              |
|           |          |                           |             | <b>CAPACITORS GROUP</b> |              |                           |              |
| R26301    |          | Carbon chip 47kohm 1/16W  | ERJ3GEYJ473 | C22001                  |              | Electrolytic 100µF/6.3V   | EEVH80J101   |
| R26311    |          | Carbon chip 4.7kohm 1/16W | ERJ3GEYG472 | C22002                  |              | Ceramic chip 0.1µF/16V    | ECUX1C104ZF/ |
| R26312    |          | Carbon chip 10kohm 1/16W  | ERJ3GEYJ103 | C22003                  |              | Ceramic chip 0.1µF/16V    | ECUX1C104KB/ |
|           |          |                           |             | C22004,05               |              | Ceramic chip 0.1µF/16V    | ECUX1C104ZF/ |
| R26603    |          | Carbon chip 47kohm 1/16W  | ERJ3GEYG473 | C22006                  |              | Ceramic chip 0.01µF/50V   | ECUX1H103KB/ |
| R26604    |          | Carbon chip 22kohm 1/16W  | ERJ3GEYG223 | C22007                  |              | Ceramic chip 0.1µF/16V    | ECUX1C104KB/ |
| R26605    |          | Carbon chip 33kohm 1/16W  | ERJ3GEYJ333 | C22008                  |              | Ceramic chip 2200pF/16V   | ECUX1H222KB/ |
| R26606    |          | Carbon chip 15kohm 1/16W  | ERJ3GEYJ153 | C22009                  |              | Ceramic chip 0.1µF/16V    | ECUX1C104KB/ |
| R26607    |          | Carbon chip 1Mohm 1/16W   | ERJ3GEYJ105 | C22010                  |              | Ceramic chip 0.1µF/16V    | ECUX1C104ZF/ |
| R26612,13 |          | Carbon chip 22kohm 1/16W  | ERJ3GEYJ223 | C22011~13               |              | Ceramic chip 0.1µF/16V    | ECUX1C104KB/ |
| R26615    |          | Carbon chip 1Mohm 1/16W   | ERJ3GEYJ105 | C22014,15               |              | Ceramic chip 0.1µF/16V    | ECUX1C104ZF/ |
| R26616,17 |          | Carbon chip 100ohm 1/16W  | ERJ3RBD101  | C22016                  |              | Ceramic chip 3.3µF/10V    | ECUM1A335K/  |
| R26618    |          | Carbon chip 1Mohm 1/16W   | ERJ3GEYJ105 | C22017                  |              | Ceramic chip 0.01µF/50V   | ECUX1H103KB/ |
| R26619    |          | Carbon chip 100ohm 1/16W  | ERJ3RBD101  | C22018                  |              | Ceramic chip 1200pF/50V   | ECUX1H122KB/ |
|           |          |                           |             | C22019                  |              | Ceramic chip 5600pF/50V   | ECUX1H562KB/ |

| Ref. No.  | Part No. | Part Name                | Remarks      | Ref. No.  | Part No. | Part Name               | Remarks      |
|-----------|----------|--------------------------|--------------|-----------|----------|-------------------------|--------------|
| C22020    |          | Ceramic chip 3900pF/50V  | ECUX1H392KBV | C24211~13 |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22021    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C24214    |          | Tantalum chip 10μF/10V  | ECST1AY106Z  |
| C22024    |          | Ceramic chip 1200pF/50V  | ECUX1H122KBV | C24215    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22025    |          | Ceramic chip 5600pF/50V  | ECUX1H562KBV | C24216    |          | Electrolytic 330μF/6.3V | ECEV0JA331   |
| C22026    |          | Ceramic chip 1200pF/50V  | ECUX1H122KBV | C24217    |          | Tantalum chip 10μF/10V  | ECST1AY106Z  |
| C22027    |          | Ceramic chip 5600pF/50V  | ECUX1H562KBV | C24218    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22029    |          | Ceramic chip 3900pF/50V  | ECUX1H392KBV | C24221~23 |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22031,32 |          | Ceramic chip 1000pF/50V  | ECUX1H102KBV | C24224    |          | Tantalum chip 10μF/10V  | ECST1AY106Z  |
| C22033,34 |          | Ceramic chip 1200pF/50V  | ECUX1H122KBV | C24225    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22035    |          | Ceramic chip 1800pF/50V  | ECUX1H182KBV | C24227    |          | Tantalum chip 10μF/10V  | ECST1AY106Z  |
| C22036-38 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C24228    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22039    |          | Ceramic chip 10pF/50V    | ECUX1H100DCV | C24231,32 |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22040    |          | Ceramic chip 5600pF/50V  | ECUX1H562KBV | C24241    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22501-03 |          | Ceramic chip 0.1μF/16V   | ECUX1C104KBV | C24242    |          | Ceramic chip 39pF/50V   | ECUX1H390JCV |
| C22504    |          | Ceramic chip 0.01μF/50V  | ECUX1H103KBV |           |          |                         |              |
| C22505,06 |          | Ceramic chip 0.1μF/16V   | ECUX1C104KBV | C24653    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C22507-09 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV |           |          |                         |              |
| C22511    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25201    |          | Electrolytic 22μF/6.3V  | EEVHB0J220   |
| C22512    |          | Electrolytic 22μF/16V    | EEVHB1C220   | C25202    |          | Ceramic chip 56pF/50V   | ECUX1H560JCV |
| C23001-16 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25203,04 |          | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C23019-27 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25205    |          | Ceramic chip 0.18μF/10V | ECUM1A184KBV |
| C23028    |          | Electrolytic 330μF/6.3V  | ECEV0JA331   | C25206,07 |          | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C23030    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25208,09 |          | Ceramic chip 1000pF/50V | ECUX1H102KBV |
| C23037,38 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25210    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23039    |          | Electrolytic 330μF/6.3V  | ECEV0JA331   | C25211    |          | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C23051-54 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25212,13 |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23055    |          | Tantalum chip 10μF/10V   | ECST1AY106Z  | C25214    |          | Ceramic chip 6800pF/50V | ECUX1H682KBV |
| C23056    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25215    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23061-64 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25216    |          | Ceramic chip 330pF/50V  | ECUX1H331JCV |
| C23065    |          | Tantalum chip 10μF/10V   | ECST1AY106Z  | C25217    |          | Ceramic chip 0.22μF/10V | ECUX1A224KBV |
| C23066    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25218    |          | Ceramic chip 1μF/10V    | ECUM1A105KBN |
|           |          |                          |              | C25219,20 |          | Ceramic chip 22pF/50V   | ECUX1H221JCV |
| C23201    |          | Ceramic chip 0.01μF/50V  | ECUX1H103ZFV | C25221    |          | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C23202    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25222    |          | Ceramic chip 0.22μF/10V | ECUX1A224KBV |
| C23211    |          | Ceramic chip 0.01μF/50V  | ECUX1H103ZFV | C25223    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23212    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25224    |          | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C23221    |          | Ceramic chip 0.01μF/50V  | ECUX1H103ZFV | C25225~28 |          | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C23222    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25229    |          | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C23223    |          | Ceramic chip 1μF/10V     | ECUM1A105KBN | C25230    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23224    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25231    |          | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C23225    |          | Ceramic chip 1μF/10V     | ECUM1A105KBN | C25232,33 |          | Ceramic chip 0.68μF/10V | ECUM1A684KBN |
| C23226,27 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25234    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23241-45 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C25235    |          | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C23251,52 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C26201-06 |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C23253    |          | Tantalum chip 10μF/16V   | ECST1CX106Z  | C26207    |          | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C23254    |          | Electrolytic 33μF/6.3V   | EEVHB0J330   | C26251    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C24201-03 |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C26252    |          | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C24204    |          | Tantalum chip 10μF/10V   | ECST1AY106Z  | C26253    |          | Electrolytic 100μF/6.3V | EEVHB0J101   |
| C24205    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C26254    |          | Electrolytic 330μF/6.3V | ECEV0JA331   |
| C24206    |          | Electrolytic 1500μF/6.3V | EEVFC0J152XP | C26255    |          | Ceramic chip 0.01μF/50V | ECUX1H103ZFV |
| C24207    |          | Tantalum chip 10μF/10V   | ECST1AY106Z  |           |          |                         |              |
| C24208    |          | Ceramic chip 0.1μF/16V   | ECUX1C104ZFV | C26301    |          | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |

| Ref. No.          | Part No.     | Part Name               | Remarks      |
|-------------------|--------------|-------------------------|--------------|
| C26311            |              | Ceramic chip 100pF/50V  | ECUX1H101JCV |
| C26312            |              | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C26321            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26502            |              | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C26503            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26506            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26511            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26514            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26516            |              | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C26519            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26521            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26601            |              | Ceramic chip 0.01μF/50V | ECUX1H103KBV |
| C26602            |              | Ceramic chip 1000pF/50V | ECUX1H102JCV |
| C26604            |              | Ceramic chip 0.1μF/16V  | ECUX1C104KBV |
| C26605            |              | Ceramic chip 8pF/50V    | ECUX1H080DCV |
| C26606            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26607            |              | Electrolytic 33μF/6.3V  | EEVHB0J330   |
| C26608            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26609            |              | Ceramic chip 1000pF/50V | ECUX1H102JCV |
| C26612            |              | Ceramic chip 12pF/50V   | ECUX1H120JCV |
| C26613            |              | Ceramic chip 15pF/50V   | ECUX1H150JCV |
| C26614~16         |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26617            |              | Ceramic chip 15pF/50V   | ECUX1H150JCV |
| C26618            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C26619            |              | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C27001~16         |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C27017,18         |              | Electrolytic 100μF/6.3V | EEVHB0J101   |
| C27021            |              | Ceramic chip 1000pF/50V | ECUX1H102KBV |
| C27025            |              | Ceramic chip 1μF/10V    | ECUM1A105KBN |
| C27051            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| C27052            |              | Tantalum chip 6.8μF/10V | ECST1AY685Z  |
| C27053            |              | Ceramic chip 0.1μF/16V  | ECUX1C104ZFV |
| OTHER PARTS GROUP |              |                         | Q'ty         |
| FL26251~54        | 928 0075 500 | Filter                  | 4            |
| FP22501           | 928 0097 504 | 5P connector (female)   | 1            |
| FP24201           | 928 0110 504 | 21P connector (female)  | 1            |
| FP24203           | 928 0110 517 | 22P connector (female)  | 1            |
| FP25201           | 928 0077 003 | 35P connector (female)  | 1            |
| FP26201           | 928 0110 520 | 6P connector (female)   | 1            |
| L22001,02         | 928 0075 209 | Coil 10μH               | 2            |
| L23251            | 928 0075 209 | Coil 10μH               | 1            |
| L25201            | 928 0075 209 | Coil 10μH               | 1            |
| L26251            | 928 0075 209 | Coil 10μH               | 1            |

| Ref. No.   | Part No.     | Part Name             | Remarks | Q'ty |
|------------|--------------|-----------------------|---------|------|
| L26501     | 928 0098 107 | Coil 22μH             |         | 1    |
| LB22501,02 | 928 0078 303 | Coil                  |         | 2    |
| LB22503,04 | 928 0096 000 | Inductor              |         | 2    |
| LB23001    | 928 0078 219 | Coil                  |         | 1    |
| LB24241    | 928 0096 000 | Inductor              |         | 1    |
| LB24251~65 | 928 0096 000 | Inductor              |         | 15   |
| LB24271~88 | 928 0096 000 | Inductor              |         | 18   |
| LB26201~04 | 928 0078 206 | Coil                  |         | 4    |
| LB26213    | 928 0078 219 | Coil                  |         | 1    |
| LB26605    | 928 0078 219 | Coil                  |         | 1    |
| LB26506    | 928 0096 000 | Inductor              |         | 1    |
| LB26511    | 928 0096 000 | Inductor              |         | 1    |
| LB26513~15 | 928 0078 219 | Coil                  |         | 3    |
| LB26516    | 928 0096 000 | Inductor              |         | 1    |
| LB26518    | 928 0078 219 | Coil                  |         | 1    |
| LB26519    | 928 0096 000 | Inductor              |         | 1    |
| LB26520    | 928 0078 219 | Coil                  |         | 1    |
| LB26601    | 928 0096 000 | Inductor              |         | 1    |
| LB26602    | 928 0078 219 | Coil                  |         | 1    |
| LB26603,04 | 928 0096 000 | Inductor              |         | 2    |
| LB26606    | 928 0096 000 | Inductor              |         | 1    |
| LB26607    | 928 0098 219 | Coil                  |         | 1    |
| LB26608    | 928 0096 000 | Inductor              |         | 1    |
| LB26609    | 928 0078 219 | Coil                  |         | 1    |
| LB27001,02 | 928 0078 219 | Coil                  |         | 2    |
| P24251     | 928 0097 805 | 5P connector (Male)   |         | 1    |
| P26251     | 928 0097 902 | 8P connector (Male)   |         | 1    |
| PS27001    | 928 0098 008 | 8P connector (female) |         | 1    |
| X26601     | 928 0110 708 | Crystal oscillator    |         | 1    |
| X26602     | 928 0110 805 | Crystal oscillator    |         | 1    |
| X26603     | 928 0110 902 | Crystal oscillator    |         | 1    |



## POWER SUPPLY P.W.B.

| Ref. No.                    | Part No.     | Part Name                  | Remarks     | Ref. No.                | Part No. | Part Name                | Remarks      |
|-----------------------------|--------------|----------------------------|-------------|-------------------------|----------|--------------------------|--------------|
| <b>SEMICONDUCTORS GROUP</b> |              |                            |             |                         |          |                          |              |
| IC21011                     | 928 0080 207 | IC STRM6559LF              |             | R21042                  |          | Carbon film 100ohm 1/4W  | ERDS2FJ101   |
| IC21121                     | 928 0068 300 | IC PQ3RD13                 |             | R21043                  |          | Carbon film 220kohm 1/4W | ERDS2FJ224   |
| IC21135                     | 928 0111 600 | IC PQ09RD1X                |             | R21044                  |          | Carbon film 10kohm 1/4W  | ERDS2FJ103   |
| IC21151                     | 928 0111 600 | IC PQ09RD1X                |             | R21045                  |          | Carbon film 3.9Mohm 1/2W | ERDS1TJ395   |
|                             |              |                            |             | R21046                  |          | Carbon film 4.7Mohm 1/2W | ERDS1TJ475   |
| Δ PR21121                   | 928 0076 208 | IC protector VSF0015A10    |             | R21101                  |          | Carbon film 100ohm 1/4W  | ERDS2TJ101   |
| Δ PR21141                   | 928 0076 208 | IC protector VSF0015A10    |             | R21103                  |          | Carbon film 330ohm 1/4W  | ERDS2TJ331   |
| Δ PR21171                   | 928 0076 208 | IC protector VSF0015A10    |             | R21104                  |          | Carbon film 390ohm 1/4W  | ERDS2TJ391   |
|                             |              |                            |             | R21105                  |          | Carbon film 150ohm 1/4W  | ERDS2TJ151   |
| Q21031                      | 928 0081 604 | Transistor PS2561L1V1M     |             | R21106                  |          | Carbon film 100ohm 1/4W  | ERDS2TJ101   |
| Q21101,02                   | 928 0072 105 | Transistor 2SD1991A-R      |             | R21107                  |          | Carbon film 220ohm 1/4W  | ERDS2TJ221   |
| Q21111                      | 928 0111 804 | Transistor 2SJ525          |             | R21108                  |          | Carbon film 240ohm 1/4W  | ERDS2TJ241   |
| Q21145                      | 928 0111 901 | Transistor 2SB1321AR       |             | R21111                  |          | Carbon film 10kohm 1/4W  | ERDS2TJ103   |
| Q21146                      | 928 0072 202 | Transistor 2SB1320A-R      |             | R21112                  |          | Carbon film 1Mohm 1/4W   | ERDS2TJ105   |
| Q21191                      | 928 0112 007 | Transistor 2SK170V         |             | R21135                  |          | Metal oxide 8.2kohm 1/4W | ER0S2CHF8201 |
| Q21195                      | 928 0112 104 | Transistor 2SJ74V          |             | R21136                  |          | Metal oxide 1.5kohm 1/4W | ER0S2CHF1501 |
| QR21111                     | 928 0095 409 | Transistor-resistor UN4213 |             | R21145                  |          | Metal oxide 8.2kohm 1/4W | ER0S2CHF8201 |
| D21001                      | 928 0073 201 | Diode S1WBA60S             |             | R21146                  |          | Carbon film 330ohm 1/4W  | ERDS2TJ331   |
| D21002                      | 928 0073 311 | RF converter ENC471D5A     |             | R21161                  |          | Carbon film 100kohm 1/4W | ERDS2TJ104   |
| D21011                      | 928 0079 603 | Diode AP01C                |             | R21181                  |          | Carbon film 100ohm 1/4W  | ERDS2TJ101   |
| D21021                      | 928 0073 405 | Diode AU01Z                |             | R21191                  |          | Carbon film 560ohm 1/4W  | ERDS2TJ561   |
| D21031                      | 928 0002 405 | Diode MA165VT              |             | R21193                  |          | Carbon film 1Mohm 1/4W   | ERDS2TJ105   |
| D21041                      | 928 0111 309 | Diode MA700                |             | R21195                  |          | Carbon film 560ohm 1/4W  | ERDS2TJ561   |
| D21042                      | 928 0079 700 | Diode MA4200H              |             | R21197                  |          | Carbon film 1Mohm 1/4W   | ERDS2TJ105   |
| D21101                      | 928 0079 807 | Diode MA4051MVT            |             | K21191                  |          | Carbon film 0ohm 1/4W    | ERDS2TY0     |
| D21111                      | 928 0111 406 | Diode MA7D55               |             | K21195                  |          | Carbon film 0ohm 1/4W    | ERDS2TY0     |
| D21121                      | 928 0091 908 | Diode 11ES1                |             | <b>CAPACITORS GROUP</b> |          |                          |              |
| D21131                      | 928 0111 503 | Diode 11EQS10              |             | C21001                  |          | Mylar film 0.15μF/250V   | ECQU2A154MV  |
| D21141                      | 928 0111 503 | Diode 11EQS10              |             | C21002,03               |          | Ceramic 470pF            | VCK0286B471  |
| D21151,52                   | 928 0111 503 | Diode 11EQS10              |             | C21004                  |          | Mylar film 0.068μF/250V  | ECQU2A683MV  |
| D21161                      | 928 0073 405 | Diode AU01Z                |             | C21005                  |          | Ceramic 1000pF           | VCK0286E102  |
| D21162                      | 928 0023 701 | Diode MA4030M              |             | C21011                  |          | Electrolytic 68μF/400V   | ECEC2GG680   |
| D21171                      | 928 0073 900 | IC AK04                    |             | C21012                  |          | Ceramic 0.01μF/500V      | ECKD2H103PU  |
| D21191                      | 928 0002 405 | Diode MA165VT              |             | C21013                  |          | Ceramic 120pF/1000V      | ECCZ3A121KGE |
| D21195                      | 928 0002 405 | Diode MA165VT              |             | C21021                  |          | Electrolytic 47μF/35V    | VCEA1VJC470  |
| <b>RESISTORS GROUP</b>      |              |                            |             | C21031                  |          | Mylar film 0.01μF/50V    | ECQB1H103JF  |
| R21002                      |              | Composition 330kohm 1/2W   | ERC12AGM334 | C21042                  |          | Ceramic 1000pF/50V       | ECKF1H102KB  |
| R21011                      |              | Metal oxide 68kohm 1W      | ERG1SJ683   | C21043                  |          | Electrolytic 330μF/6.3V  | VCEA0JJC331  |
| R21012                      |              | Metal oxide 0.82ohm 1W     | ERX1SJR82   | C21101                  |          | Mylar film 0.1μF/50V     | ECQB1H104JF  |
| R21013,14                   |              | Carbon film 470ohm 1/4W    | ERDS2FJ471  | C21114                  |          | Electrolytic 220μF/10V   | VCEA1AJC222  |
| R21021,22                   |              | Carbon film 220kohm 1/4W   | ERDS2FJ224  | C21115                  |          | Ceramic 0.1μF/25V        | ECFR1E104ZF  |
| R21023                      |              | Metal oxide 10ohm 1/2W     | ERG12SJ100  | C21116                  |          | Electrolytic 220μF/10V   | ECA1APXS221  |
| R21031                      |              | Carbon film 1.8kohm 1/4W   | ERDS2FJ182  | C21117                  |          | Electrolytic 220μF/10V   | ECA1APX221   |
| R21041                      |              | Carbon film 1.5kohm 1/4W   | ERDS2FJ152  | C21118                  |          | Electrolytic 3900μF/10V  | EEUFA1A392   |
|                             |              |                            |             | C21121                  |          | Electrolytic 1000μF/6.3V | ECA0JM102    |
|                             |              |                            |             | C21131                  |          | Electrolytic 180μF/25V   | VCEA1EJH181  |
|                             |              |                            |             | C21133                  |          | Electrolytic 33μF/25V    | VCEA1EJC330  |

## OPERATION P.W.B.

| Ref. No. | Part No. | Part Name                    | Remarks     |
|----------|----------|------------------------------|-------------|
| C21135   |          | Electrolytic 220 $\mu$ F/10V | ECA1APX221  |
| C21136   |          | Electrolytic 47 $\mu$ F/16V  | VCEA1CJC470 |
| C21141   |          | Electrolytic 180 $\mu$ F/25V | VCEA1EJH181 |
| C21143   |          | Electrolytic 33 $\mu$ F/25V  | VCEA1EJC330 |
| C21145   |          | Electrolytic 220 $\mu$ F/10V | ECA1APX221  |
| C21146   |          | Electrolytic 47 $\mu$ F/16V  | VCEA1CJC470 |
| C21147   |          | Electrolytic 220 $\mu$ F/25V | VCEA1EJC221 |
| C21151   |          | Electrolytic 390 $\mu$ F/25V | EEUFA1E391  |
| C21153   |          | Electrolytic 220 $\mu$ F/25V | VCEA1EJC221 |
| C21154   |          | Electrolytic 220 $\mu$ F/16V | ECA1CM221   |
| C21161   |          | Electrolytic 82 $\mu$ F/50V  | VCEA1HJH820 |
| C21171   |          | Electrolytic 330 $\mu$ F/10V | VCEA1AJH331 |
| C21191   |          | Mylar film 0.022 $\mu$ F/50V | ECQB1H223JF |
| C21192   |          | Electrolytic 330 $\mu$ F/10V | ECA1APX331  |
| C21193   |          | Mylar film 0.022 $\mu$ F/50V | ECQB1H223JF |
| C21194   |          | Electrolytic 470 $\mu$ F/10V | ECA1APX471  |
| C21195   |          | Mylar film 0.022 $\mu$ F/50V | ECQB1H223JF |
| C21196   |          | Electrolytic 330 $\mu$ F/10V | ECA1APX331  |
| C21197   |          | Mylar film 0.022 $\mu$ F/50V | ECQB1H223JF |
| C21198   |          | Electrolytic 470 $\mu$ F/10V | ECA1APX471  |

| OTHER PARTS GROUP |                  |                        | Qty |
|-------------------|------------------|------------------------|-----|
| Part No.          | Part Description | Part Description       | Qty |
| FP21103           | 928 0076 605     | 11P connector (female) | 1   |
| L21001,02         | 928 0096 408     | Line filter            | 2   |
| L21111            | 928 0096 505     | Coil 10μH              | 1   |
| L21112            | 928 0053 904     | Inductor 10μH          | 1   |
| L21131            | 928 0111 707     | Coil 33μH              | 1   |
| L21141            | 928 0111 707     | Coil 33μH              | 1   |
| L21151            | 928 0075 102     | Coil 22μH              | 1   |
| LB21011           | 928 0078 002     | Coil                   | 2   |
| LB21014           | 928 0096 602     | Coil                   | 1   |
| P21001            | 9MV JS31 66      | AC Inlet               | 1   |
| P21101            | 928 0096 707     | 8P connector (male)    | 1   |
| P21102            | 928 0096 804     | 16P connector (male)   | 1   |
| T21011            | 928 0112 201     | Transformer            | 1   |
| ZA21001,02        | 9ME YF52 BC      | Fuse holder            | 2   |
| ZA21031           | 9MV MC13         | Earth spring           | 1   |
| ZA21111-14        | 9MV JR09 78      | Earth angle            | 4   |

| Ref. No.                    | Part No.     | Part Name                  | Remarks |
|-----------------------------|--------------|----------------------------|---------|
| <b>SEMICONDUCTORS GROUP</b> |              |                            |         |
| IC26001                     | 928 0094 002 | IC MN1872423CA             |         |
| IC26002                     | 928 0071 203 | IC PNA4601M03VT            |         |
| IC26003                     | 928 0071 300 | IC PST7023                 |         |
| QR26001                     | 928 0024 108 | Transistor-resistor UN2212 |         |
| QR26002                     | 928 0094 808 | Transistor DTA123JK        |         |
| D26002-07                   | 928 0002 405 | Diode MA165VT              |         |
| DL26001                     | 928 0111 008 | Display tube               |         |

| RESISTORS GROUP |  |                           |             |
|-----------------|--|---------------------------|-------------|
| R26002,03       |  | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 |
| R26004          |  | Carbon chip 220ohm 1/10W  | ERJ6GEYG221 |
| R26005          |  | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 |
| R26006-08       |  | Carbon chip 220ohm 1/10W  | ERJ6GEYG221 |
| R26010          |  | Carbon chip 220ohm 1/10W  | ERJ6GEYG221 |
| R26023-29       |  | Carbon chip 47kohm 1/10W  | ERJ6GEYF473 |
| R26030-32       |  | Carbon chip 100kohm 1/10W | ERJ6GEYG104 |
| R26035-37       |  | Carbon chip 100kohm 1/10W | ERJ6GEYG104 |
| R26044,45       |  | Carbon chip 47kohm 1/10W  | ERJ6GEYF473 |

| CAPACITORS GROUP |  |                               |              |
|------------------|--|-------------------------------|--------------|
| C26001           |  | Electrolytic 10 $\mu$ F/50V   | ECEA1HKA100  |
| C26002           |  | Ceramic chip 0.01 $\mu$ F/50V | ECUM1H103ZFN |
| C26003           |  | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C26004           |  | Electrolytic 220 $\mu$ F/6.3V | ECEA0JKA221  |
| C26005           |  | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C26006           |  | Electrolytic 47 $\mu$ F/6.3V  | ECEA0JKA470  |
| C26007           |  | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C26008           |  | Electrolytic 47 $\mu$ F/6.3V  | ECEA0JKA470  |

| OTHER PARTS GROUP |              |                        | Q'ty |
|-------------------|--------------|------------------------|------|
| FP26001           | 928 0110 533 | 6P connector (female)  | 1    |
| FP26002           | 928 0076 648 | 10P connector (female) | 1    |
| L26001            | 928 0111 105 | Coil 100μH             | 1    |
| L26002            | 928 0084 155 | Coil 220μH             | 1    |
| S26001            | 928 0074 909 | Switch                 | 1    |
| S26004,05         | 928 0074 909 | Switch                 | 2    |
| S26008-10         | 928 0074 909 | Switch                 | 3    |
| X26001            | 928 0099 405 | Ceramic oscillator     | 1    |

## VOLUME P.W.B.

| Ref. No.                    | Part No.     | Part Name                | Remarks      |
|-----------------------------|--------------|--------------------------|--------------|
| <b>SEMICONDUCTORS GROUP</b> |              |                          |              |
| D26191                      | 928 0113 705 | LED LNJ2D1LPQJA          | Red          |
| <b>RESISTORS GROUP</b>      |              |                          |              |
| VR24551                     | 928 0113 802 | Variable resistor 10kohm | EVJY15F01A14 |
| <b>OTHER PARTS GROUP</b>    |              |                          |              |
| FP24601                     | 928 0076 635 | 10P connector (female)   |              |
| FP24602                     | 928 0076 606 | 11P connector (female)   |              |
| FP24603                     | 928 0110 546 | 5P connector (female)    |              |
| S26191                      | 928 0074 909 | Switch                   |              |

## HEADPHONE JACK P.W.B.

| Ref. No.                    | Part No.     | Part Name                     | Remarks      |
|-----------------------------|--------------|-------------------------------|--------------|
| <b>SEMICONDUCTORS GROUP</b> |              |                               |              |
| IC24551                     | 928 0111 202 | IC M5218AFP                   |              |
| <b>RESISTORS GROUP</b>      |              |                               |              |
| R24551,52                   |              | Carbon chip 47ohm 1/8W        | ERJ8GEYJ470  |
| R24553                      |              | Carbon chip 15kohm 1/10W      | ERJ6GEYG153  |
| R24554                      |              | Carbon chip 12kohm 1/10W      | ERJ6GEYF123  |
| R24555                      |              | Carbon chip 15kohm 1/10W      | ERJ6GEYG153  |
| R24556                      |              | Carbon chip 12kohm 1/10W      | ERJ6GEYF123  |
| R24557,58                   |              | Carbon chip 1kohm 1/10W       | ERJ6GEYG102  |
| <b>CAPACITORS GROUP</b>     |              |                               |              |
| C24551,52                   |              | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C24553,54                   |              | Ceramic chip 0.01 $\mu$ F/50V | ECUM1H103ZFN |
| C24555,56                   |              | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| <b>OTHER PARTS GROUP</b>    |              |                               |              |
| FP24551                     | 928 0110 546 | 5P connector (female)         | 1            |
| J24551                      | 9MV JJ02 73  | Headphone jack                | 1            |
| L24551~53                   | 928 0111 105 | Coil 100 $\mu$ H              | 3            |

## COAXIAL P.W.B.

| Ref. No.                 | Part No.     | Part Name               | Remarks      |
|--------------------------|--------------|-------------------------|--------------|
| <b>RESISTORS GROUP</b>   |              |                         |              |
| R24490                   |              | Carbon chip 75ohm 1/10W | ERJ6GEYG750  |
| <b>CAPACITORS GROUP</b>  |              |                         |              |
| C24491                   |              | Ceramic chip 82pF/50V   | ECUM1H820JCN |
| C24492                   |              | Ceramic chip 1000pF/50V | ECUM1H102KBN |
| <b>OTHER PARTS GROUP</b> |              |                         | <b>Q'ty</b>  |
| J24490                   | 9MV JJ05 90  | 1P pin jack             | 1            |
| J24491                   | 928 0114 500 | Flat card cable         | 1            |
| LB24490,91               |              | Chip bead               | 2            |

## AV JACK P.W.B.

| Ref. No.                    | Part No.     | Part Name                  | Remarks     |
|-----------------------------|--------------|----------------------------|-------------|
| <b>SEMICONDUCTORS GROUP</b> |              |                            |             |
| IC23531                     | 928 0068 902 | IC AN3581S                 |             |
| IC24450                     | 928 0112 706 | IC TC7W04F                 |             |
| IC24452                     | 9MT OTX1 78  | IC TOTX178                 |             |
| IC24501                     | 928 0111 202 | IC M5218AFP                |             |
| Q23501                      | 928 0113 404 | Transistor 2SA1022-B       |             |
| Q23503                      | 928 0113 307 | Transistor 2SC2404-D       |             |
| Q23504                      | 928 0113 307 | Transistor 2SC2295-B       |             |
| Q23530                      | 928 0113 501 | Transistor 2SC2295-B       |             |
| Q23531                      | 928 0113 501 | Transistor 2SA1022-B       |             |
| Q23534                      | 928 0113 501 | Transistor 2SA1022-B       |             |
| Q23601                      | 928 0113 608 | Transistor 2SD601A         |             |
| Q23650                      | 928 0113 608 | Transistor 2SD601A         |             |
| Q23660                      | 928 0113 608 | Transistor 2SD601A         |             |
| Q23670                      | 928 0113 608 | Transistor 2SD601A         |             |
| Q24405-12                   | 928 0094 905 | Transistor 2SD1328         |             |
| Q24501,02                   | 928 0113 608 | Transistor 2SD601A         |             |
| QR23501                     | 928 0024 302 | Transistor-resistor UN2211 |             |
| QR23531,32                  | 928 0024 302 | Transistor-resistor UN2211 |             |
| QR24400                     | 928 0024 302 | Transistor-resistor UN2211 |             |
| QR24401                     | 928 0036 905 | Transistor-resistor UN2115 |             |
| QR24402                     | 928 0024 302 | Transistor-resistor UN2211 |             |
| QR24403,04                  | 928 0026 601 | Transistor-resistor UN2111 |             |
| D23501                      | 928 0112 308 | Diode MA742                |             |
| D24400                      | 928 0091 209 | Diode MA3047M              |             |
| D24401                      | 928 0112 405 | Diode MA152A               |             |
| D24402                      | 928 0074 307 | Diode MA152WA              |             |
| D24403,04                   | 928 0112 405 | Diode MA152A               |             |
| <b>RESISTORS GROUP</b>      |              |                            |             |
| R23501                      |              | Carbon chip 560ohm 1/10W   | ERJ6GEYF561 |
| R23502                      |              | Carbon chip 100ohm 1/10W   | ERJ6GEYG101 |
| R23503                      |              | Carbon chip 1kohm 1/10W    | ERJ6GEYG102 |
| R23504                      |              | Carbon chip 470ohm 1/10W   | ERJ6GEYG471 |
| R23507                      |              | Carbon chip 11kohm 1/10W   | ERJ6ENF1102 |
| R23508                      |              | Carbon chip 8.2kohm 1/10W  | ERJ6ENF8201 |
| R23509                      |              | Carbon chip 1kohm 1/10W    | ERJ6GEYG102 |
| R23510                      |              | Carbon chip 470ohm 1/10W   | ERJ6GEYG471 |
| R23511                      |              | Carbon chip 10kohm 1/10W   | ERJ6GEYG103 |
| R23514                      |              | Carbon chip 22ohm 1/10W    | ERJ6GEYG220 |
| R23515                      |              | Carbon chip 2.2kohm 1/10W  | ERJ6GEYG222 |

| Ref. No.  | Part No. | Part Name                 | Remarks     | Ref. No.                | Part No. | Part Name                | Remarks      |
|-----------|----------|---------------------------|-------------|-------------------------|----------|--------------------------|--------------|
| R23516    |          | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 | R24509,10               |          | Carbon chip 0ohm 1/10W   | ERJ6GEY0R00  |
| R23517    |          | Carbon chip 270ohm 1/10W  | ERJ6GEYG271 | R24679~81               |          | Carbon chip 820ohm 1/10W | ERJ6GEYG821  |
| R23532,33 |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | R24711                  |          | Carbon chip 10kohm 1/10W | ERJ6GEYG103  |
| R23534,35 |          | Carbon chip 470ohm 1/10W  | ERJ6GEYJ471 | K24301                  |          | Carbon chip 0ohm 1/10W   | ERJ6GEY0R00  |
| R23537    |          | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 | <b>CAPACITORS GROUP</b> |          |                          |              |
| R23538    |          | Carbon chip 220ohm 1/10W  | ERJ6GEYG221 | C23501                  |          | Electrolytic 100μF/16V   | ECEA1CKA101  |
| R23539    |          | Carbon chip 240ohm 1/10W  | ERJ6GEYJ241 | C23502,03               |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23540    |          | Carbon chip 820ohm 1/10W  | ERJ6GEYG821 | C23504                  |          | Ceramic chip 33pF/50V    | ECUM1H330JCN |
| R23542    |          | Carbon chip 1kohm 1/10W   | ERJ6GEYG102 | C23505                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23543    |          | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 | C23506                  |          | Electrolytic 33μF/16V    | ECEA1CKA330  |
| R23554~56 |          | Carbon chip 1kohm 1/10W   | ERJ6GEYG102 | C23507                  |          | Electrolytic 1μF/50V     | ECEA1HKA010  |
| R23557    |          | Carbon chip 470ohm 1/10W  | ERJ6GEYG471 | C23508                  |          | Electrolytic 100μF/16V   | ECEA1CKA101  |
| R23558,59 |          | Carbon chip 75ohm 1/10W   | ERJ6ENF75R0 | C23509                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23560    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23510                  |          | Electrolytic 100μF/16V   | ECEA1CKA101  |
| R23563,64 |          | Carbon chip 71.5ohm 1/10W | ERJ6ENF71R5 | C23511                  |          | Ceramic chip 15pF/50V    | ECUM1H150JCN |
| R23601    |          | Carbon chip 560ohm 1/10W  | ERJ6GEYF561 | C23512                  |          | Electrolytic 2.2μF/50V   | ECEA1HKA2R2  |
| R23602    |          | Carbon chip 3kohm 1/10W   | ERJ6GEYG302 | C23513                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103KBN |
| R23604,05 |          | Carbon chip 18kohm 1/10W  | ERJ6GEYG183 | C23530                  |          | Electrolytic 470μF/6.3V  | ECA0JM471    |
| R23606    |          | Carbon chip 1.5kohm 1/10W | ERJ6GEYG152 | C23531                  |          | Ceramic chip 270pF/50V   | ECUM1H271JCN |
| R23650    |          | Carbon chip 560ohm 1/10W  | ERJ6GEYF561 | C23532                  |          | Ceramic chip 82pF/50V    | ECUM1H820JCN |
| R23651    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23533                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23652    |          | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 | C23534                  |          | Ceramic chip 82pF/50V    | ECUM1H820JCN |
| R23653    |          | Carbon chip 1.2kohm 1/10W | ERJ6GEYF123 | C23550                  |          | Electrolytic 100μF/16V   | ECEA1CKA101  |
| R23654    |          | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 | C23551                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23660    |          | Carbon chip 560ohm 1/10W  | ERJ6GEYF561 | C23552                  |          | Electrolytic 47μF/16V    | ECEA1CKA470  |
| R23661    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23553                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23662    |          | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 | C23555                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23663    |          | Carbon chip 12kohm 1/10W  | ERJ6GEYF123 | C23556                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103KBN |
| R23664    |          | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 | C23557                  |          | Electrolytic 220μF/10V   | ECEA1AKA221  |
| R23670    |          | Carbon chip 560ohm 1/10W  | ERJ6GEYF561 | C23558,59               |          | Electrolytic 22μF/16V    | ECEA1CKA220  |
| R23671    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23560                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R23672    |          | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 | C23561,62               |          | Electrolytic 1000μF/6.3V | ECA0JM102    |
| R23673    |          | Carbon chip 12kohm 1/10W  | ERJ6GEYF123 | C23564                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103KBN |
| R23674    |          | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 | C23601                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103KBN |
| R24400    |          | Carbon chip 330ohm 1/10W  | ERJ6GEYG331 | C23602                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R24401    |          | Carbon chip 22kohm 1/10W  | ERJ6GEYG223 | C23651                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R24402    |          | Carbon chip 33kohm 1/10W  | ERJ6GEYF333 | C23652                  |          | Ceramic chip 15pF/50V    | ECUM1H150JCN |
| R24403    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23661                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R24404    |          | Carbon chip 1kohm 1/10W   | ERJ6GEYG102 | C23662                  |          | Ceramic chip 15pF/50V    | ECUM1H150JCN |
| R24405    |          | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 | C23671                  |          | Ceramic chip 0.01μF/50V  | ECUM1H103ZFN |
| R24406    |          | Carbon chip 22kohm 1/10W  | ERJ6GEYG223 | C23672                  |          | Ceramic chip 15pF/50V    | ECUM1H150JCN |
| R24407~19 |          | Carbon chip 820ohm 1/10W  | ERJ6GEYG821 | C24400                  |          | Electrolytic 100μF/6.3V  | ECEA0JKA101  |
| R24420~27 |          | Carbon chip 220ohm 1/10W  | ERJ6GEYG221 | C24401~08               |          | Ceramic chip 1000pF/50V  | ECUM1H102JCN |
| R24428    |          | Carbon chip 1kohm 1/10W   | ERJ6GEYG102 | C24409~14               |          | Ceramic chip 0.1μF/50V   | ECUM1H104ZFN |
| R24451    |          | Carbon chip 10ohm 1/10W   | ERJ6GEYJ100 | C24450                  |          | Electrolytic 4.7μF/50V   | ECEA1HKA4R7  |
| R24501    |          | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |                         |          |                          |              |
| R24502,03 |          | Carbon chip 820ohm 1/10W  | ERJ6GEYG821 |                         |          |                          |              |
| R24504    |          | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |                         |          |                          |              |
| R24505,06 |          | Carbon chip 1kohm 1/10W   | ERJ6GEYG102 |                         |          |                          |              |

## AC-3 P.W.B.

| Ref. No.  | Part No. | Part Name                     | Remarks      |
|-----------|----------|-------------------------------|--------------|
| C24451    |          | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C24452    |          | Electrolytic 4.7 $\mu$ F/50V  | ECEA1HKA4R7  |
| C24453    |          | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C24454    |          | Ceramic chip 270pF/50V        | ECUM1H271JCN |
| C24456,57 |          | Ceramic chip 0.1 $\mu$ F/50V  | ECUM1H104ZFN |
| C24458    |          | Electrolytic 100 $\mu$ F/6.3V | ECEA0JKA101  |
| C24501    |          | Electrolytic 10 $\mu$ F/16V   | ECEA1CKA100  |
| C24502    |          | Electrolytic 100 $\mu$ F/16V  | ECEA1CKA101  |

## OTHER PARTS GROUP

| Ref. No.   | Part No.     | Part Name              | Remarks | Q'ty |
|------------|--------------|------------------------|---------|------|
| FL23501    | 928 0112 502 | Filter                 |         | 1    |
| FL23601    | 928 0099 609 | Filter                 |         | 1    |
| FL23650    | 928 0112 502 | Filter                 |         | 1    |
| FL23660    | 928 0112 609 | Filter                 |         | 1    |
| FP24301    | 928 0079 409 | 20P connector (female) |         | 1    |
| G24301-03  | 9MV JR09 78  | Earth angle            |         | 3    |
| J23551     | 9MV JJ05 61  | YC connector           |         | 1    |
| J24301     | 9MV JJ05 94  | 6P pin jack            |         | 1    |
| J24302     | 9MV JJ05 92  | 2P pin jack            |         | 1    |
| L23501,02  | 928 0075 306 | Coil 22 $\mu$ H        |         | 2    |
| L23531     | 928 0112 803 | Coil 8.2 $\mu$ H       |         | 1    |
| L23550,51  | 928 0075 306 | Coil 22 $\mu$ H        |         | 2    |
| L24400     | 928 0096 204 | Coil 10 $\mu$ H        |         | 1    |
| L24402,03  | 928 0096 204 | Coil 10 $\mu$ H        |         | 2    |
| L24404     | 928 0053 904 | Inductor 10 $\mu$ H    |         | 1    |
| L24405     | 928 0096 204 | Coil 10 $\mu$ H        |         | 1    |
| L24450     | 928 0112 900 | Coil 0.1 $\mu$ H       |         | 1    |
| L24451     | 928 0075 306 | Coil 22 $\mu$ H        |         | 1    |
| LB23552-55 | 928 0078 235 | Coil                   |         | 4    |
| LB24301-08 | 928 0078 235 | Coil                   |         | 8    |
| P24301     | 928 0113 006 | 22P connector (female) |         | 1    |
| P24302     | 928 0098 406 | 16P connector (female) |         | 1    |
| P24303     | 928 0113 103 | 20P connector (male)   |         | 1    |
| P24450     | 928 0098 503 | 5P connector (male)    |         | 1    |
| P24451     | 928 0113 200 | 3P connector (female)  |         | 1    |
| T24450     | 9MV LQ07 90  | Transformer            |         | 1    |

| Ref. No.             | Part No.     | Part Name          | Remarks |
|----------------------|--------------|--------------------|---------|
| SEMICONDUCTORS GROUP |              |                    |         |
| IC24302,03           | 928 0069 901 | IC NJM4580M        |         |
| IC24304,05           | 928 0114 607 | IC TC9412AFELP     |         |
| IC24306-12           | 928 0069 901 | IC NJM4580M        |         |
| Q24307-10            | 928 0113 608 | Transistor 2SD601A |         |

## RESISTORS GROUP

|           |  |                           |             |
|-----------|--|---------------------------|-------------|
| R24302-05 |  | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 |
| R24310,11 |  | Carbon chip 100ohm 1/10W  | ERJ6GEYG101 |
| R24312-15 |  | Carbon chip 100kohm 1/10W | ERJ6GEYG104 |
| R24316-22 |  | Carbon chip 7.5kohm 1/10W | ERJ6GEYG752 |
| R24323    |  | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 |
| R24324    |  | Carbon chip 7.5kohm 1/10W | ERJ6GEYG752 |
| R24325-27 |  | Carbon chip 10kohm 1/10W  | ERJ6GEYG103 |
| R24328,29 |  | Carbon chip 2.2kohm 1/10W | ERJ6GEYG222 |
| R24330,31 |  | Carbon chip 10kohm 1/10W  | ERJ6RBD103  |
| R24332,33 |  | Carbon chip 20kohm 1/10W  | ERJ6RBD203  |
| R24334,35 |  | Carbon chip 2.2kohm 1/10W | ERJ6GEYG222 |
| R24336-39 |  | Carbon chip 7.5kohm 1/10W | ERJ6RBD752  |
| R24340,41 |  | Carbon chip 10kohm 1/10W  | ERJ6RBD103  |
| R24342-45 |  | Carbon chip 27kohm 1/10W  | ERJ6RBD273  |
| R24346,47 |  | Carbon chip 100ohm 1/10W  | ERJ6RBD101  |
| R24348,49 |  | Carbon chip 100kohm 1/10W | ERJ6RBD104  |
| R24350,51 |  | Carbon chip 10kohm 1/10W  | ERJ6RBD103  |
| R24352,53 |  | Carbon chip 100kohm 1/10W | ERJ6RBD104  |
| R24354    |  | Carbon chip 330ohm 1/10W  | ERJ6RBD331  |
| R24355    |  | Carbon chip 33kohm 1/10W  | ERJ6RBD333  |
| R24356    |  | Carbon chip 330ohm 1/10W  | ERJ6RBD331  |
| R24357    |  | Carbon chip 33kohm 1/10W  | ERJ6RBD333  |
| R24358,59 |  | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |
| R24360    |  | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562 |
| R24361    |  | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |
| R24362    |  | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562 |
| R24363,64 |  | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |
| R24365    |  | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562 |
| R24366    |  | Carbon chip 3.9kohm 1/10W | ERJ6GEYG392 |
| R24367-71 |  | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562 |
| R24372-79 |  | Carbon chip 47kohm 1/10W  | ERJ6GEYF473 |

## CAPACITORS GROUP

|           |  |                              |              |
|-----------|--|------------------------------|--------------|
| C24301,02 |  | Electrolytic 10 $\mu$ F/16V  | ECA1CAK100X  |
| C24303    |  | Electrolytic 47 $\mu$ F/16V  | ECA1CAK470X  |
| C24304    |  | Electrolytic 47 $\mu$ F/6.3V | VCEA0JAE470  |
| C24305    |  | Electrolytic 47 $\mu$ F/6.3V | ECEA0JJPZ470 |
| C24306    |  | Electrolytic 47 $\mu$ F/6.3V | VCEA0JAE470  |
| C24307-10 |  | Ceramic chip 1000pF/50V      | ECUM1H102JCN |

## AV 21P P.W.B.

| Ref. No.                 | Part No.     | Part Name               | Remarks      | Ref. No.                    | Part No.     | Part Name                  | Remarks      |
|--------------------------|--------------|-------------------------|--------------|-----------------------------|--------------|----------------------------|--------------|
| C24311~14                |              | Ceramic chip 100pF/50V  | ECUM1H101JCN | <b>SEMICONDUCTORS GROUP</b> |              |                            |              |
| C24315                   |              | Electrolytic 10μF/16V   | ECA1CAK100X  | IC23801                     | 928 0114 102 | IC NJM2267M                |              |
| C24316                   |              | Electrolytic 47μF/6.3V  | ECEA0JPZ470  | IC23802                     | 928 0114 209 | IC BA7660FS                |              |
| C24317                   |              | Ceramic chip 0.1μF/50V  | ECUM1H104ZFN | IC23803~06                  | 928 0080 906 | IC MC14053BF               |              |
| C24318                   |              | Electrolytic 47μF/6.3V  | ECEA0JPZ470  | IC23807                     | 9MT C4W5 3F  | IC TC4W53F                 |              |
| C24319                   |              | Electrolytic 10μF/16V   | ECA1CAK100X  | IC23808                     | 928 0114 306 | IC AN79L05M                |              |
| C24320                   |              | Ceramic chip 0.1μF/50V  | ECUM1H104ZFN | IC23809                     | 928 0114 403 | IC NJM4558M                |              |
| C24321                   |              | Electrolytic 220μF/10V  | ECA1APX221   |                             |              |                            |              |
| C24323,24                |              | Ceramic chip 0.1μF/50V  | ECUM1H104ZFN | Q23860                      | 928 0081 303 | Transistor 2SB710-R        |              |
| C24325                   |              | Electrolytic 220μF/10V  | ECA1APX221   | Q23861                      | 928 0115 004 | Transistor XN4402          |              |
| C24326                   |              | Mylar film 100pF/50V    | ECHR1H101JZ  | Q23863                      | 928 0081 206 | Transistor 2SD602A-R       |              |
| C24327                   |              | Electrolytic 47μF/16V   | ECA1CAK470X  | Q23880                      | 928 0115 101 | Transistor XN4502          |              |
| C24328                   |              | Mylar film 100pF/50V    | ECHR1H101JZ  | Q23881                      | 928 0081 303 | Transistor 2SB710-R        |              |
| C24329                   |              | Electrolytic 10μF/16V   | ECA1CAK100X  | Q23883                      | 928 0115 206 | Transistor XN4401          |              |
| C24331                   |              | Electrolytic 47μF/16V   | ECA1CAK470X  |                             |              |                            |              |
| C24332                   |              | Electrolytic 10μF/16V   | ECA1CAK100X  | QR23860                     | 928 0115 305 | Transistor XN1213          |              |
| C24333                   |              | Ceramic chip 0.01μF/50V | ECUM1H103ZFN | QR23861                     | 928 0081 400 | Transistor-resistor UN2217 |              |
| C24334,35                |              | Mylar film 1000pF/50V   | ECHR1H102JZ  | QR23862                     | 928 0115 402 | Transistor XN1112          |              |
| C24336                   |              | Electrolytic 470μF/10V  | ECA1APX471   | QR23864                     | 928 0115 305 | Transistor XN1213          |              |
| C24337,38                |              | Mylar film 100pF/50V    | ECHR1H101JZ  | QR23880                     | 928 0115 305 | Transistor XN1213          |              |
| C24339~42                |              | Ceramic chip 18pF/50V   | ECUM1H180JCN | QR23881                     | 928 0081 400 | Transistor-resistor UN2217 |              |
| C24343                   |              | Electrolytic 470μF/10V  | ECA1APX471   | QR23882                     | 928 0115 305 | Transistor XN1213          |              |
| C24344                   |              | Ceramic chip 0.01μF/50V | ECUM1H103ZFN | QR23883                     | 928 0115 509 | Transistor-resistor UN2213 |              |
| C24345,46                |              | Mylar film 0.022μF/50V  | ECHR1H223JZ  | QR23884                     | 928 0115 305 | Transistor XN1213          |              |
| C24347,48                |              | Electrolytic 47μF/6.3V  | VCEA0JAE470  |                             |              |                            |              |
| C24349                   |              | Electrolytic 47μF/16V   | ECA1CAK470X  | D23803                      |              | Ceramic chip 100pF/50V     | ECUM1H101JCN |
| C24350                   |              | Electrolytic 47μF/10V   | ECA1ANK470X  | D23807                      |              | Ceramic chip 100pF/50V     | ECUM1H101JCN |
| C24351~53                |              | Electrolytic 47μF/16V   | ECA1CAK470X  | D23821                      | 928 0113 909 | Diode MA8120-L             |              |
| C24354                   |              | Electrolytic 47μF/6.3V  | ECEA0JPZ470  | D23860                      | 928 0112 405 | Diode MA152A               |              |
| C24355                   |              | Ceramic chip 0.1μF/50V  | ECUM1H104ZFN | D23861                      | 928 0114 005 | Diode MA152WK              |              |
| C24356                   |              | Carbon chip 0ohm 1/10W  | ERJ6GEY0R00  | D23880                      | 928 0112 405 | Diode MA152A               |              |
| C24357,58                |              | Ceramic chip 0.1μF/50V  | ECUM1H104ZFN |                             |              |                            |              |
| <b>OTHER PARTS GROUP</b> |              |                         |              | <b>RESISTORS GROUP</b>      |              |                            |              |
| FP24302                  | 928 0079 409 | 20P connector (female)  | 1            | R23801                      | 928 9012 881 | Carbon chip 100ohm 1/10W   | ERJ6GEYG101  |
| FP24304                  | 928 0110 559 | 21P connector (female)  | 1            | R23802                      | 928 9013 217 | Carbon chip 820ohm 1/10W   | ERJ6GEYG821  |
|                          |              |                         |              | R23803,04                   | 928 9012 881 | Carbon chip 100ohm 1/10W   | ERJ6GEYG101  |
|                          |              |                         |              | R23805                      |              | Carbon chip 75ohm 1/10W    | ERJ6ENF75R0  |
|                          |              |                         |              | R23806                      | 928 9012 881 | Carbon chip 100ohm 1/10W   | ERJ6GEYG101  |
|                          |              |                         |              | R23807                      | 928 9013 217 | Carbon chip 820ohm 1/10W   | ERJ6GEYG821  |
|                          |              |                         |              | R23808,09                   | 928 9012 881 | Carbon chip 100ohm 1/10W   | ERJ6GEYG101  |
|                          |              |                         |              | R23810,11                   | 928 9015 228 | Carbon chip 0ohm 1/10W     | ERJ6GEY0R00  |
|                          |              |                         |              | R23812                      |              | Carbon chip 75ohm 1/10W    | ERJ6ENF75R0  |
|                          |              |                         |              | R23813                      | 928 9015 228 | Carbon chip 0ohm 1/10W     | ERJ6GEY0R00  |
|                          |              |                         |              | R23814~16                   | 928 9015 105 | Carbon chip 5.6kohm 1/10W  | ERJ6GEYG562  |
|                          |              |                         |              | R23817,18                   |              | Carbon chip 75ohm 1/10W    | ERJ6GEYG750  |
|                          |              |                         |              | R23819                      |              | Carbon chip 75ohm 1/10W    | ERJ6ENF75R0  |
|                          |              |                         |              | R23820~22                   | 928 9015 150 | Carbon chip 33kohm 1/10W   | ERJ6GEYF333  |
|                          |              |                         |              | R23823                      |              | Carbon chip 75ohm 1/10W    | ERJ6ENF75R0  |
|                          |              |                         |              | R23824~26                   |              | Carbon chip 75ohm 1/10W    | ERJ6GEYG750  |
|                          |              |                         |              | R23828                      |              | Carbon chip 150ohm 1/10W   | ERJ6GEYG151  |
|                          |              |                         |              | R23829                      | 928 9015 228 | Carbon chip 0ohm 1/10W     | ERJ6GEY0R00  |



| Ref. No.                | Part No.     | Part Name                 | Remarks      | Ref. No.                 | Part No.     | Part Name              | Remarks | Q'ty |
|-------------------------|--------------|---------------------------|--------------|--------------------------|--------------|------------------------|---------|------|
| R23831                  |              | Carbon chip 150ohm 1/10W  | ERJ6GEYG151  | <b>OTHER PARTS GROUP</b> |              |                        |         |      |
| R23833,34               | 928 9015 228 | Carbon chip 0ohm 1/10W    | ERJ6GEY0R00  | J23801,02                | 9MVJS39 21   | 21P connector (female) |         | 2    |
| R23835~38               |              | Carbon chip 150ohm 1/10W  | ERJ6GEYG151  |                          |              |                        |         |      |
| R23839                  |              | Carbon chip 75ohm 1/10W   | ERJ6ENF75R0  | L23801                   | 928 0114 801 | Coil 470μH             |         | 1    |
| R23860                  | 928 9012 849 | Carbon chip 4.7kohm 1/10W | ERJ6GEYF472  | L23802                   | 928 0114 908 | Coil 47μH              |         | 1    |
| R23861,62               | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  | L23803                   | 928 0114 801 | Coil 470μH             |         | 1    |
| R23863                  | 928 9015 105 | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562  | L23804                   | 928 0114 908 | Coil 47μH              |         | 1    |
| R23864                  | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  | L23805                   | 928 0075 306 | Coil 22μH              |         | 1    |
| R23865,66               | 928 9015 105 | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562  |                          |              |                        |         |      |
| R23867                  | 928 9013 042 | Carbon chip 2.7kohm 1/10W | ERJ6GEYG272  | LB23801-05               | 928 0078 235 | Coil                   |         | 5    |
| R23868                  | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  |                          |              |                        |         |      |
| R23869                  | 928 9013 181 | Carbon chip 680ohm 1/10W  | ERJ6GEYG681  | PS23801                  | 928 0110 562 | 20P connector (female) |         | 1    |
| R23880,81               | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  |                          |              |                        |         |      |
| R23882                  | 928 9015 105 | Carbon chip 5.6kohm 1/10W | ERJ6GEYG562  |                          |              |                        |         |      |
| R23883                  | 928 9012 849 | Carbon chip 4.7kohm 1/10W | ERJ6GEYF472  |                          |              |                        |         |      |
| R23884,85               | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  |                          |              |                        |         |      |
| R23886                  | 928 9013 178 | Carbon chip 68ohm 1/10W   | ERJ6GEYG680  |                          |              |                        |         |      |
| R23887                  | 928 9013 068 | Carbon chip 3.3kohm 1/10W | ERJ6GEYG332  |                          |              |                        |         |      |
| R23888~91               | 928 9012 849 | Carbon chip 4.7kohm 1/10W | ERJ6GEYF472  |                          |              |                        |         |      |
| R23892,93               | 928 9012 917 | Carbon chip 100kohm 1/10W | ERJ6GEYG104  |                          |              |                        |         |      |
| K23801,02               |              | Carbon chip 0ohm 1/10W    | ERJ6GEY0R00  |                          |              |                        |         |      |
| <b>CAPACITORS GROUP</b> |              |                           |              |                          |              |                        |         |      |
| C23801                  |              | Electrolytic 100μF/16V    | ECEA1CKA101  |                          |              |                        |         |      |
| C23802                  |              | Ceramic chip 0.1μF/50V    | ECUM1H104ZFN |                          |              |                        |         |      |
| C23803,04               |              | Ceramic chip 470pF/50V    | ECUM1H471JCN |                          |              |                        |         |      |
| C23805,06               |              | Electrolytic 4.7μF/50V    | ECEA1HKA4R7  |                          |              |                        |         |      |
| C23807~10               |              | Ceramic chip 470pF/50V    | ECUM1H471JCN |                          |              |                        |         |      |
| C23811,12               |              | Electrolytic 100μF/6.3V   | ECEA0JKA101  |                          |              |                        |         |      |
| C23813,14               |              | Electrolytic 330μF/6.3V   | ECEA0JKA331  |                          |              |                        |         |      |
| C23815,16               |              | Ceramic chip 470pF/50V    | ECUM1H471JCN |                          |              |                        |         |      |
| C23817                  |              | Electrolytic 100μF/16V    | ECEA1CKA101  |                          |              |                        |         |      |
| C23818                  |              | Electrolytic 100μF/6.3V   | ECEA0JKA101  |                          |              |                        |         |      |
| C23819                  |              | Ceramic chip 0.1μF/50V    | ECUM1H104ZFN |                          |              |                        |         |      |
| C23820                  |              | Electrolytic 22μF/16V     | ECEA1CKA220  |                          |              |                        |         |      |
| C23821                  |              | Electrolytic 47μF/10V     | ECEA1AKN470  |                          |              |                        |         |      |
| C23822                  |              | Electrolytic 100μF/6.3V   | ECEA0JKA101  |                          |              |                        |         |      |
| C23823                  |              | Electrolytic 47μF/10V     | ECEA1AKN470  |                          |              |                        |         |      |
| C23824                  |              | Electrolytic 22μF/16V     | ECEA1CKA220  |                          |              |                        |         |      |
| C23825                  |              | Electrolytic 100μF/6.3V   | ECEA0JKA101  |                          |              |                        |         |      |
| C23826                  |              | Electrolytic 47μF/10V     | ECEA1AKN470  |                          |              |                        |         |      |
| C23827                  |              | Electrolytic 22μF/16V     | ECEA1CKA220  |                          |              |                        |         |      |
| C23828~37               |              | Ceramic chip 0.1μF/50V    | ECUM1H104ZFN |                          |              |                        |         |      |
| C23838                  |              | Electrolytic 47μF/16V     | ECEA1CKS470  |                          |              |                        |         |      |
| C23839                  |              | Ceramic chip 0.1μF/50V    | ECUM1H104ZFN |                          |              |                        |         |      |
| C23840                  |              | Electrolytic 47μF/16V     | ECEA1CKS470  |                          |              |                        |         |      |
| C23841~43               |              | Ceramic chip 0.1μF/50V    | ECUM1H104ZFN |                          |              |                        |         |      |
| C23844,45               |              | Electrolytic 47μF/16V     | ECEA1EKS470  |                          |              |                        |         |      |

## MECHANISM I/F P.W.B.

| Ref. No.                 | Part No.     | Part Name                  | Remarks      |             |
|--------------------------|--------------|----------------------------|--------------|-------------|
| <b>CAPACITORS GROUP</b>  |              |                            |              |             |
| C20001,02                |              | Ceramic chip 1 $\mu$ F/16V | ECUM1C105ZFN |             |
| <b>OTHER PARTS GROUP</b> |              |                            |              | <b>Q'ty</b> |
| FP20001                  | 928 0077 100 | 26P connector (female)     |              | 1           |
| FP20002                  | 928 0077 016 | 35P connector (female)     |              | 1           |
| FP20003                  | 928 0077 029 | 11P connector (female)     |              | 1           |
| P20004,05                | 928 0076 305 | 2P connector (male)        |              | 2           |

## LOADING MOTOR P.W.B.

| Ref. No.                 | Part No.     | Part Name             | Remarks | Q'ty |
|--------------------------|--------------|-----------------------|---------|------|
| <b>OTHER PARTS GROUP</b> |              |                       |         |      |
| FP20101                  | 928 0077 210 | 5P connector (female) |         | 1    |
| S20102                   | 9MV SH01 68  | Switch                |         | 1    |

# DENON

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